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ABSTRACT

Designed to identify exemplary strategies and procedures for assessing employer satisfaction with former vocational education students' training and job performance, this handbook provides ideas for initiating such an assessment and for improving upon current assessment practices. It consists of five chapters. Chapter 1 provides an overview of the contents. A rationale for assessing employer satisfaction is presented in chapter 2. Chapter 3 discusses such issues and problems in assessing employer satisfaction with the training and job performance of former vocational students as funding, variables introduced by subject selection, the self-employed graduate, time lapse between training and employer surveys, training program limitations, cost factors, advisory committees, differences in emphasis within training institutions, sampling, employer contact, and analyzing and reporting. An overview of the differences and commonalities between employer satisfaction with training and job performance is given in chapter 4. Chapter 5 examines such steps required in designing, planning, and implementing an employer follow-up as developing study objectives, data collection methods, data analysis procedures, and writing and disseminating reports. A glossary, selected bibliography, and annotated bibliography are also provided. (A series of related handbooks on vocational education evaluation are available separately through ERIC--see note.) (MN)

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Research & Development Series No. 210

EVALUATING EMPLOYER SATISFACTION:

Measurement of Satisfaction with Training and Job Performance of Former Vocational Education Students

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

This publication is one in a series of handbooks on evaluation produced by the National Center for Research in Vocational Education. A primary purpose for this handbook series is to offer assistance to persons working to increase the quality of vocational education. Reflected in all publications of the handbook series is the intent to advance the theory and practice of evaluation. Specifically, the material presented in this handbook will help provoke, stimulate, and lead the way toward more reliable and valid assessment of employer satisfaction of vocational education.

This handbook was developed by the Evaluation and Policy Division of the National Center for Research in Vocational Education under a contract with the U.S. Department of Education, Office of Vocational and Adult Education. The National Center is particularly indebted to Stephen J. Franchak, Project Director; Elizabeth Jen, Graduate Research Associate; and Eliseo Ponce, Graduate Research Associate, who had the primary responsibilities for the preparation of this document. Also, recognition and appreciation are extended to Larry L. Smiley, Associate Professor of Education Administration, University of North Dakota, who contributed an original draft which formed a primary base for the development of this handbook.

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Robert E. Taylor
Executive Director
National Center for Research in
Vocational Education

EXECUTIVE SUMMARY

The effects of the Education Amendments of 1976 on evaluation practices are beginning to be realized. The complex nature of evaluation, its theory and methods, continue to face those state and local evaluators charged with planning and conducting evaluation studies. Recent assessments of state and local evaluation practices indicate that formal employer follow-up data are collected much less consistently than student follow-up. Reasons for this lack of attention to this type of evaluation activity are varied.

According to the literature, evaluation efforts have been considered inadequate, particularly in regard to having an impact upon program improvement. Several reasons have been posited to support this statement, such as (1) programs often have multiple goals that are difficult to evaluate, (2) programs are complex and dynamic, and (3) inappropriate evaluation designs or no evaluation designs are used to address the evaluation goals and objectives. However, evaluation efforts are included as an integral part of state and local education program activities for program improvement and accountability. There is a need to provide evaluators and users of evaluation results with guidelines and practices for their tasks and responsibilities.

This handbook was designed to identify exemplary strategies and procedures for assessing employer satisfaction with former vocational education students' training and job performance. Specifically, the handbook provides ideas for initiating such an assessment, or for improving upon current practices. Also, it focuses on problems and issues the vocational education evaluator encounters in doing this type of evaluation activity.

The target audience for this handbook is varied. Potential users include, but are not limited to, state and local vocational education program evaluators, personnel directly responsible for conducting employer follow-up studies, and members of advisory committees.

The handbook is organized to serve as a "ready reference" on the subject of employer follow-up. It is divided into five sections and numerous subsections, followed by selected and annotated bibliographies, and an appendix.

Chapter I provides a comprehensive overview of contents. Chapter II presents a rationale for conducting employer follow-up. Chapter III discusses problems and issues in assessing employer satisfaction with former vocational education students' training and job performance. Chapter IV presents an overview of the differences and commonalities between employer satisfaction with training and job performance. Chapter V examines the steps required in designing, planning, and implementing an employer follow-up. A major portion of this section is adapted from a previous National Center Evaluation Handbook: *Guidelines and Practices for Conducting Follow-up Studies,* by Franchak and Spirer (1978).

The handbook also provides a Selected Bibliography and an Annotated Bibliography containing detailed summaries of major studies conducted on state and local levels to assess employer satisfaction with former vocational students' training and job performance.

The Appendix includes a sample employer questionnaire, which may be modified or adapted to meet the evaluator's particular needs in conducting an employer follow-up.

Where appropriate, checklists are provided to encourage the reader to think through various processes or steps in designing, planning, and conducting employer follow-up studies. Also, key references are incorporated into the text to provide the reader with relevant information about major concepts and specific content to make informed decisions about alternative strategies and procedures.

The major value of the handbook is a comprehensive view of the many-faceted concepts, strategies, and procedures associated with the assessment of employer satisfaction with former vocational education students' training and job performance. Moreover, it is intended to focus on the problems one encounters as a vocational education evaluator, how these problems have been solved or not solved, assessment trends, and what still remains for further study.

CHAPTER I

INTRODUCTION

Background

The purpose of this handbook is to identify exemplary strategies and procedures to help guide the design and conduct of studies for assessing employer satisfaction with former vocational education students' training and job performance. Specifically, the handbook provides ideas for initiating such an assessment or for improving upon current practice. Also, it focuses on problems and issues related to this type of evaluation activity. This assessment of employer satisfaction falls under the category of program evaluation or impact evaluation.

The content for this handbook was developed primarily from a synthesis of concepts, practices, and materials from the current state of the art. Moreover, the information base was developed from a survey of the literature on follow-up studies and job performance, interviews with selected state and local practitioners, a review of relevant laws and regulations, and a study of exemplary evaluation systems and employer follow-up instruments. This publication draws extensively from previous National Center evaluation projects. Specifically, information from the following publications has been used in the development of this handbook: Franchak and Spirer (1978), Gray et al. (1978), Asche and Vogler (1980), Stevenson (1979), Adams and Walker (1979), Darcy (1979), and Farley (1979).

The handbook is intended to provide a comprehensive view of the many-faceted concepts, strategies, and procedures associated with the assessment of employer satisfaction with former vocational education students' training and job performance. Moreover, it is intended to focus on problems one encounters as a vocational education evaluator, how these problems have been solved or not solved, the main trends in evaluation, and what still remains for further study. The practitioners doing the employer follow-up are the experts in the processes which are the essence of this handbook. Not only have we asked them for specific information that is difficult to find from published sources, but, even more important, we have looked to those practitioners to provide guidance in developing the contents; and have asked for their review of the document for its meaningfulness and usefulness.

Audience

The target audience for this handbook is varied. The primary audience is state and local vocational education evaluators. Potential users include, but are not limited to, vocational education advisory committee members, and personnel responsible for program development. Naturally, not all chapters of this handbook are equally important to each member of such a varied group of users. The advisory committee member has vastly different needs from the program staff member responsible for the conduct of an employer follow-up study. And people undertaking for the first time the design and conduct of an employer follow-up versus people who, after ten years of follow-up study experience, plan to redesign their system to satisfy federal or state reporting requirements, are examples that

reflect varied information needs. Thus, it is recommended that the initial task of readers be to examine the table of contents and decide which section or subsections are most relevant to their needs. Another aid in identifying appropriate content is to review and complete the checklist for Assessing Individual Problems in the following subsection.

To the extent possible, each chapter of the handbook has been written to provide readers with enough relevant information about major concepts and specific content to make informed decisions about alternative strategies and procedures. References have been incorporated into the text to assist further in this task.

Organization

The handbook is organized to serve as a ready reference on the subject of employer follow-up. It is divided into five sections and numerous subsections followed by selected and annotated bibliographies and an appendix. Each chapter has been written to provide readers with enough relevant information about specific content to make informed decisions about alternative strategies and procedures. References have been incorporated into the text to assist in this task.

Chapter I provides a comprehensive overview of contents. Chapter II presents a rationale for conducting employer follow-up. Chapter III discusses issues and problems in assessing employer satisfaction with former vocational education students' training and job performance.

The appendix includes a sample questionnaire, which may be modified or adapted to meet the evaluator's particular needs in conducting an employer follow-up study. This instrument contains questions addressing both employer satisfaction with both the training and job performance of former vocational education students.

A glossary is included to provide the reader with a definition of terms considered important in employer follow-up studies.

The handbook also provides a selected bibliography and an annotated bibliography containing detailed summaries of studies conducted on state and local levels to assess employer satisfaction with training and with job performances of former vocational students.

The following checklist is recommended as a starting point for the reader to identify and prioritize employer follow-up study problems.

CHECKLIST 1

Assessing Individual Problems

Do these problems exist for you?	*Yes*	*No*	*Rand Order by Extent of Problem*
1. Lack of understanding of the purpose for assessing employer satisfaction	☐	☐	____
2. Lack of understanding of appropriate assessment procedures	☐	☐	____
3. Lack of clear definitions of terms used in the data collection	☐	☐	____
4. Inadequate response rates from employers	☐	☐	____
5. Lack of understanding concerning report generation for user groups	☐	☐	____
6. Unwillingness of decision makers to use employer satisfaction data	☐	☐	____
7. Lack of understanding of the relationship between assessment of training and job performance	☐	☐	____

CHAPTER II

RATIONALE FOR ASSESSING EMPLOYER SATISFACTION

Vocational educators at the state and local levels are under increasing pressure to plan and conduct meaningful and useful evaluations. Since the passage of the 1963 Vocational Education Act, increased effort has been expended toward determining the quality of vocational education programs. For the purposes of this handbook, quality is comprised of three factors.

1. *Effectiveness:* Does the vocational program enable students to—
   a. meet program objectives, and
   b. perform satisfactorily on the job?
2. *Efficiency:* Doing things in the most cost-effective manner. Is there an apparent waste in the vocational program of student time, instructional time, materials and equipment, and use of facilities?
3. *Relevance:* Are the knowledge and skills learned in the program—
   a. performed on the job,
   b. critical to job success, and
   c. consistent with on-the-job practices.

Legislators and the general public are often frustrated in their attempts to determine how well vocational education is serving the community. Complaints of poor vocational programs may be reported in the media (e.g., Maeroff 1979; Raspberry 1979a) or brought directly to the attention of the state and local directors of vocational education (e.g., Illinois State and Locally Developed Evaluation System, Oklahoma Process-Product Evaluation System, Ohio Pride System, California Copes, Texas TEX-SIS, Michigan Evaluation System, Alabama Evaluation System, and Colorado Evaluation System). These states provide a systematic review of programs via self-evaluation and third-party on-site program reviews. The results are presented to the school director, who then prepares a plan to address the problem as identified in the evaluation results. Positive results, likewise, come to light in a similar manner. Typically, however, a comprehensive view of the quality of vocational education is not available in terms that meet everyone's satisfaction.

Legislative Requirements

Current legislation, the Education Amendments of 1976, offers prescriptive evaluation requirements for those state (SEA) and local (LEA) education agencies receiving federal funds. These requirements found in Sec. 112 (b) (1) are:

> (A) each state shall, during the five-year period of the state plan, evaluate the effectiveness of each program within the state being assisted with funds available under this Act; and the results of these evaluations shall be used to revise the state's programs, and shall be made readily available to the state advisory councils; and

(B) each state shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each such program within the state which purports to impart entry-level job skills according to the extent to which program completers and leavers–

i. find employment in occupations related to their training, and

ii. are considered by their employers to be well trained and prepared for employment, except that in no case can pursuit of additional education or training by program completers or leavers be considered negatively in these evaluations.

This focus on preparing students for productive participation in the labor market is not new. It dates back to the 1917 Smith-Hughes Act, the beginning of federally funded vocational education. Over the years this focus was retained in subsequent amendments to that Act. More recently, the congressional intent was reinforced in the Vocational Education Act of 1976:

> The Committee has specified two criteria (Sec. 112 (b) (1)-(B) (i, ii) to judge the effectiveness of programs because in our opinion, *they show most clearly whether persons trained in vocational programs are showing the results of such training* [italics added]. (U.S. Congress, House Report No. 94-1085, 1976, p. 20.

Economic Conditions

Education now finds itself having to compete for government funding with other agencies for limited human and financial resources. There seems to be a trend developing which indicates that decisions by policymaking bodies regarding resource allocations are being made with increasing frequency on the basis of evidence of program quality (effectiveness, efficiency, and relevancy); on the basis of the degree to which programs reflect community (employer needs), state, and federal interests and concerns; relevancy to social and labor market conditions; and efficiency in operating the best program with the least amount of resources. Current and projected economic conditions of rising inflation with high unemployment point to the need for valid evaluative information to support resource allocation decisions.

Status of Employer Satisfaction Assessment

In recent years, state and local agencies have conducted numerous evaluations. However, some of these efforts have been piecemeal, and there has been minimal effort to develop and implement state and local evaluations which are comprehensive, continuous, and systematic. Nevertheless, a number of states such as Alabama, California, Colorado, Illinois, Maine, New Hampshire, Oklahoma, and Ohio have developed extensive plans for implementing evaluation efforts. Still, these agencies continue to face human and financial resource problems, in addition to the complexity of evaluating methods and practices. There is a continuing need for inquiry concerning the most appropriate evaluation strategies, procedures, and techniques to use at the state and local levels.

The problem is one of developing strategies, procedures, and techniques that will offer accountability and result in more meaningful program improvement. David (1980), in a national study of vocational education, asserts that by the school year 1979-80, much activity had taken place and strong commitment to evaluation was evidenced (p. v-16). However, in a recent case study of fifteen state departments of vocational education, and in an analysis of a limited set of documents from forty-one additional states and territories, Bueke et al. (1979) indicate that formal employer follow-up

data are collected much less consistently than student follow-up data (p. 99). They add that approximately one-half the case-study states do not have statewide employer follow-up procedures at both the secondary and postsecondary levels. This finding seems to show that vocational educators are less inclined to see employer follow-up as an important and necessary indicator of vocational program effectiveness (Bueke et al. 1980, p. 99).

Nolfi et al. (1978) offer a detailed analysis of variables affecting work success in their examination of selected research findings. Citing the National Longitudinal Survey (NLS) of the High School Class of 1972, they indicate that much of the process of school choices and work success is currently unmeasurable; that luck, random influences, or factors that are beyond measurement with study variables have a very strong impact. They found that high school characteristics appear to have minimal impact on the success of graduates in the labor market. By comparison such characteristics as family income or socioeconomic status have a measurable effect on labor market success, whereas ability (as measured by SAT scores or ETS tests) is less important (Nolfi et al. 1978, p. 2). Additionally, they state that personality and motivational factors appear to have some influence. Others have presented similar and opposing views regarding the measurability of factors affecting school and work success (see Averch 1972; Darcy 1979; Grasso and Shea 1979; Jencks 1973, 1979; McKinney et al. 1978; Mertens et al. 1980; Pillimer and Light 1980).

There is some agreement among vocational educators that school systems should be held accountable for imparting certain knowledge and skills, and for making certain that there is a good fit between what is taught and the jobs available (David et al. 1980, p. v-5). Others find that many vocational educators stated they believed their accountability should be for employability but not employment (David et al. 1980, p. v-5). However, definitions of employability, like the word "outcomes," have different meanings among varied constituencies.

It appears from a review of the literature (see McKinney et al. 1978; Stevenson 1978, 1979; Darcy et al. 1979) and discussions with certain SEAs and LEAs that each constituency has its own goal(s) for vocational education. Stevens (1979) adds that the interplay of these and other group interests determine how, when, in what form, and with what success particular goals surface in a recognizable way (p. 2).

In part, the many methodological problems associated with evaluation research highlight the continuing search for effects of vocational education on employment. Copa and Forsberg (1980) state that:

> . . . a call is made for a statement of specific prior expectations for secondary vocational education, with accompanying rationale, which could better serve as a "benchmark" for judging the adequacy of those effects which can be measured (p. v).

To answer the question, does it make a difference in accordance with canons of good research, is still a goal to be achieved. Moreover, in assessing the employer satisfaction with both the training and job performance of former vocational students, the assessment requires adherence to valid procedures and methods.

Importance of Employer Satisfaction

As mentioned earlier, one measure of the effectiveness of vocational education defined in the 1976 Amendments is student employment success. The regulations for the 1976 Amendments suggest four factors of student employment success: (1) rates of employment and unemployment,

(2) wage rates, (3) duration of employment, and (4) employer satisfaction with the performance of vocational education students, as compared with the performance of students who have not had vocational education [Regulation 104.402 (c)]. In addition to these federal requirements, other reasons for assessing employer satisfaction have appeared in state and local evaluation studies. Asche and Vogler (1980) summarize reasons for the assessment of employer satisfaction:

- Recent emphasis on accountability has created pressure to support the value of vocational education.
- Employer input can be used to heighten interest in vocational education and give students a better understanding of the programs.
- Gathering employer opinion can be an effective means of setting priorities for program improvement.
- Assessment of employer satisfaction can result in improved relations between vocational education and industry.
- Information from employers on job content and requirements can be very helpful for the guidance and counseling function.
- Employer feedback can assist vocational educators in providing a labor force capable of adapting to new technology and contributing to the development of this technology.

A list of key outcomes was identified through a small nonrandom sample of nine individuals knowledgeable in vocational education and experienced in program evaluation (Darcy et al. 1979, p. 8). These individuals were asked to rate fifteen outcomes previously identified by project staff as being significant in themselves and as having special importance in evaluation. One of the fifteen key outcomes was "satisfactoriness to employers." The outcome statement was translated into an outcome question: how do employers rate former vocational students as compared with comparable nonvocational students in terms of attitudes, abilities, and performance on the job? The importance of employer satisfaction as an outcome was given additional support in other surveys (see Abramson, Title, and Cohen 1979, p. 93–109).

A major assumption undergirding this handbook is that any attempt at a valid measurement of employer satisfaction must include both the assessment of vocational training and job performance of the former vocational students. Its value for program improvement is supported by many vocational educators; however, the most valid definition(s) and best methods of assessment still remain to be determined.

Summary

This section highlighted the legislative requirements and other reasons for state and local vocational education evaluation, including employer satisfaction as a vocational education outcome. Concerns about measuring vocational education effects or outcomes were presented along with a definition of external factors, such as personal motivation and economic conditions that create difficulties in obtaining information for evaluating vocational education on the basis of outcomes. The importance of employer satisfaction information was summarized under five reasons which support vocational education improvement and accountability. The potential benefits for assessing employer satisfaction are listed in the checklist that follows.

CHECKLIST 2

Potential Benefits of Employer Satisfaction Feedback

Purposes	*Rank Order of Importance*
1. Provides information on employer satisfaction for accountability purposes.	____
2. Employer input can be used to heighten interest in vocational education and give students a better understanding of programs.	____
3. Gathering employer opinions can be an effective means of setting priorities for program improvement.	____
4. Assessment of employer satisfaction can result in improved understanding between vocational education and industry.	____
5. Information from employers on job skills and attitudes expected of employees can be very helpful for the guidance and counseling function.	____
6. Employer feedback can assist vocational educators in providing a labor force capable of adapting to new technology and contributing to the development of this technology.	____
7. Employer satisfaction information has potential for aiding in addressing the issues and problems dealing with productivity and reindustrialization.	____

CHAPTER III

ISSUES AND PROBLEMS: MEASURING EMPLOYER SATISFACTION WITH THE TRAINING AND JOB PERFORMANCE OF FORMER VOCATIONAL EDUCATION STUDENTS

Background

This chapter discusses several issues and problems involved in measuring employer satisfaction with vocational education training. It is not an exhaustive list; and many of these issues and problems relate to activities in survey research and evaluation. Readers are encouraged to reflect on these concerns as they relate to their own experiences in doing employer follow-up.

The contents of this chapter were derived from numerous sources, all based upon evaluation research, theory, and practice as well as personal experiences of individuals responsible for the design and conduct of employer follow-up studies.

Source of Funding

No extensive search is required to find a variety of follow-up studies of graduates, assessments of programs, employer studies, and the like. Many of these studies have been conducted by outside agencies under contract for a specific purpose. In many cases, the source of funding for the study (whatever it may be) is from yet another agency—a parent agency, a state department, a federal office, or a consortium.

It has often been said that educators live by the golden rule—they who have the gold rule! If this glib point of view carries any message at all, it is that as projects and studies are funded, they are accordingly subject to the dictates of their financial supporters.

As funding comes more and more from a centralized source, it follows that it will be accompanied by a mandate for particular emphases. The satisfaction of employers of vocational education graduates —essentially a grassroots matter—becomes increasingly subordinate to the whims and fancy of the funding source. When funding sources become more and more centralized, a question generally arises as to whether the needs of local employers, and concomitantly, the local vocational education program are being met in the most expeditious way.

If the satisfaction of employers of vocational education programs and former students, therefore, is to be assessed from time to time, provision must be made for such appraisals to occur regularly. Some priority must exist to assure measurement of the opinions of the smallest of employers as well as of the giants; provision must also be made for freedom in designing the most appropriate method of securing the best possible data at all levels of the vocational education spectrum.

Programs to Survey

Researchers and practitioners alike are mixed in their attitudes and opinions regarding data collection. Some view a mixed approach as appropriate, so that all constituencies are involved, whereas others strongly prefer selecting segments of the total population and dealing in greater depth within each of those segments.

Deciding which approach to use conducting employer assessments differs little from that of other evaluation research projects. A variety of vocational programs exist in any given site, each with a number of students whose employers are sources of information to the study.

If a particular program is in need of information on satisfaction measurement, then the question of which to include is easily answered by selecting employers who are known to have hired graduates of those programs. If such is not the case, the question can be answered by how extensive the study is to be and which programs, if any, can be eliminated from the assessment.

One way o guiding the decision about which programs to include or to eliminate is illustrated in a study (Smiley 1976) in which an initial data base was derived from all secondary and postsecondary sites in North Dakota with five or more vocational programs. The number five was chosen arbitrarily and could easily have been changed upward or downward as deemed most appropriate. By using a similar technique, specific programs could either be eliminated from data gathering if the number of student participants or graduates fell below some predetermined quantity, or added if the number exceeded some figure.

As with all effective research, the sample selected for study is important, if not crucial, for the purposes of generalizability. This and sound early planning are among the most important ingredients for satisfactory culmination of any study.

Variables Introduced by Selection of Subjects

Vocational education programs exist in both secondary and postsecondary settings. Students enrolled in and graduating from these two settings enter the job market armed with somewhat different skills, quite different levels of maturity, a factor certainly not to be discounted.

Gell and Jones (1975) found that employers were more inclined to hire graduates with associate of arts degrees, for instance, than those with lesser accomplishments. Smiley found (1976) that employers view older, more mature students as more satisfactory employees than younger, less mature ones. Yet in a survey of three large private companies (aggregate employment of approximatley one million)—one in manufacturing, another in utilities, and a third in retail trade—Ginzberg (p. 40) found that, "generally speaking, there were no major differences between young workers and adult workers in the objective data provided regarding on-the-job performance" (1976).

A question arises, therefore, about the type of student to be used to ascertain employer satisfaction. If employers of students who are more mature and better trained are used, a somewhat untrue picture of their former program may result. Purposes of the assessment should determine what subjects will be selected and what variables will be included.

The Self-employed Graduate

Although it is a rather easy matter to identify employers of vocational education students and graduates, it is somewhat less easy to obtain a clear understanding of their satisfaction with these employees. A predicament yet more troublesome exists when information is sought from self-employed persons who are graduates of vocational programs. Several conditions of self-employment illustrate this problem.

First, graduates who are self-employed (especially within a few years of their exit from the program) have typically not had reason to maintain a close working relationship with those involved in their former program. The absence of such contact, therefore, creates a void which tends to work against easy identification of that particular segment of graduates or former students.

Second, when self-employed persons are identified, they form a constituency that carries a dual role—both student/graduates and employers. As both employers and employees, they cannot be expected to respond to many of the questions relating to hiring graduates and the adequacy of relationships between employer and employee. It may be necessary, then, to produce a separate set of questions in order to elicit the same relative information.

Third, self-employed graduates of a vocational education program do not have the benefit of being able to make comparisons with other graduates or other employers. Their position, unique and incapable of being duplicated, does not admit itself to generalizations, since all responses regarding satisfaction are specific and totally subjective.

Fourth, self-employed graduates may be more likely to have responsibilities not directly related to their vocational education programs.

Time Lapse Between Training Survey and Employer Survey

Vocational education programs undergo changes—both evolutionary and revolutionary. As these programs fluctuate, and as personnel changes occur, a reasonable expectation is that responses regarding satisfaction may likewise differ.

Longitudinal studies often indicate an ebb and flow in many aspects, which may be desirable from time to time. Because of this apparent reality, a potential danger is present if too long a time span elapses without identification of the time categories. The reader is encouraged to review the following sources for a more detailed discussion on measurement problems using a longitudinal design:

> S. J. Franchak et al., *Specifications for Longitudinal Studies* (Columbus, Ohio: National Center for Research in Vocational Education, The Ohio State University, 1980), pp. 25–49.
>
> H. Goldstein, *The Design and Analysis of Longitudinal Studies* (London: Academic Press, 1979), pp. 4–5, 50–69.
>
> J. R. Nesselroade and P. B. Baltes, editors, *Longitudinal Research in the Study of Behavior and Development* (New York: Academic Press, 1979), pp. 29–39.

One of the complexities of fusing academic pursuits of data collection, research, and program planning and delivery with the more practical applications in business and industry is the different

perspectives of the two camps. Business and industrial employers are concerned with productivity, efficiency, and profit for their enterprises. This concern emphasizes immediacy and generally dictates that current conditions are more important than what was occurring four or five years earlier or what may be occurring several years in the future.

Educators, in their zeal for appropriate information about program evaluation and planning, must be aware of the more immediate focus of employers regarding productivity and profit, if cooperation is to take place. Data from employers who are aware that their firms will ultimately benefit from evaluation research effort will more likely provide the evaluation agency with accurate employer-satisfaction information.

Limitations of Training Programs

The content of the curriculum, the types of experiences students encounter, and the overall philosophic stance of personnel involved in a program are all determining factors of whether vocational students will be job ready when they complete a program of study and move into the job market.

Employers often react favorably regarding the extent of skill development that vocational education graduates possess when coming into the workforce, but are frequently less pleased with the lack of more general education skills of many employees, who hope to be promoted to positions with greater responsibility, prestige, and income.

An example of this point was reported by Annis and Perrigo (1968). They found that employers constantly face a problem in securing supervisory personnel from within the ranks of employees. Although many of these employees possess the required specific vocational skills, they are unfortunately lacking in the so-called leadership skills and human relations skills necessary for these supervisory positions. Consequently, the question that must be considered is whether employers can, in fact, be totally satisfied with employees who do not have the wide variety of skills necessary to advance in more complex jobs.

Cost Factors of Survey Methods

It is important to analyze the cost of various survey methods before embarking on a study, and choose the methods whose cost fits your budget. It is an unfortunate fact that survey and study priorities cannot always be carried out within the constraints of limited financial resources.

Educational institutions are constantly involved in the collection of data of one kind or another, and methods of securing data vary considerably among different evaluators. The standard method, it seems, is the mailed questionnaire; but seldom do two people agree on an expected rate of return. Follow-up postcards as reminders usually result in greater returns; telephone reminders do likewise. Still others wish to engage in tremendously sophisticated coding procedures in order to determine who has responded and who has not, at the same time assuring the respondent total anonymity.

Educators, as a group, can typically be expected to respond to mailed questionnaires in excess of 60 percent. Business people, on the other hand, fall far below that figure. Peters (1977) was able to secure responses from only 32 percent of 480 organizations in a mailed questionnaire survey, whereas 191 of 226 from that same population agreed to and held personal interviews in an earlier study (Smiley 1976).

Efforts toward public relations can certainly be enhanced when personal contact is conducted unobtrusively and sincerely. Mailed questionnaires, because of their impersonal nature, often produce negative as well as positive results. The expense of traveling great distances to hold personal interviews, however, works against conducting such studies, especially in those geographic areas where graduates are widely scattered and not readily accessible within close proximity. In this case, alternative means of data gathering must be considered.

The use of the telephone interview is certainly a viable compromise between the personal, face-to-face contact and the more impersonal mailed questionnaire. Costs are decreased considerably through elimination of traveling, lodging, and transportation costs. For further discussion on follow-up costs the reader is encouraged to see: *Guidelines and Practices for Follow-up Studies,* by S. J. Franchak and J. E. Spirer 1978, pp. 101-104; and *Mail and Telephone Surveys* by D. A. Dillman (New York: John Wiley, 1978), pp. 68-72.

Role of Advisory Committees in Measuring Employer Satisfaction

Vocational education programs utilize advisory committees in a variety of ways, involving members in the assessment of employer satisfaction is certainly an appropriate use of their individual and collective expertise. To overlook this significant and important resource is to weaken the impact that advisory committees may have on the effective functioning of programs in vocational education.

The selection of members to serve on these committees is crucial, since what each individual brings to it either enhances program growth or contributes to its deterioration. Having advisory committees comprised of intelligent, articulate, and forward-looking people offers virtually unlimited potential for the attainment of quality programs that result in highly satisfied employers. Moreover, their help with evaluation activities can be invaluable.

Differences in Emphasis within Training Institutions

The employee who has completed a program at the employer's training school may develop a camaraderie with the employer that colors the employer's satisfaction. Conversely, an opposing point of view or a less satisfactory relationship may develop between the employer and an employee who has completed a program at some other, or rival, institution.

By the same token, employers who have themselves completed a particular program are often unconsciously more favorably disposed toward employees who have gone through the same program, than toward those who come from some other area of training.

Face-to-face encounters contribute considerably in providing opportunities to observe this phenomenon and to determine more accurately how the satisfaction with the employee is associated with the place and area of training.

Evaluators who have the opportunity to observe face-to-face encounters with employees and employers are obviously in a better position to judge this phenomenon and to gauge more accurately how satisfaction with the employee is associated with the place and area of training.

Sampling

Researchers and data collectors are intimately familiar with sampling techniques and the potential problems created by not following random selection procedures. Data are necessarily suspect when samples of employers are "selected" rather than "randomly selected." A thorough reading of many surveys will raise the question as to whether data were collected from employers previously identified as favorable toward a given program or institution.

When instructors and administrators are asked to suggest employers that have hired graduates, there is a temptation—perhaps a tendency—to overlook the known skeptics. If such an incidence takes place, a potentially valuable source of information is thereby eliminated.

A later stage in the collecting of data finds the nonrespondents creating a void potentially damaging to data validity. Samples of employers need to be drawn that will eliminate such voids, and methodologies need to be used that can turn nonrespondents into respondents.

Employer Contact

It is obvious that the satisfaction of employers with graduates of programs is important to the continued success of any vocational education endeavor. If employers are satisfied, graduates may easily secure employment; if unsatisfied, employment may be difficult. If some degree of dissatisfaction exists, changes in curriculum, personnel, materials, and so forth may need to be considered. Contact with employers cannot be overlooked, if students are to be well served.

Several suggestions have already been put forth regarding how employers may be reached. An important element in such contact is to make employers aware that they are indispensable to the success of vocational programs, and that such success will ultimately pay rewards to them.

The significance of putting the best foot forward to employers, a good public relations technique, cannot be overestimated. If employers are made to feel important, asked for advice and counsel, and looked upon as a valuable resource for program development, the vocational education program will more than likely benefit in return.

Employers are busy people who have businesses to manage, factories to operate, and a myriad of activities to oversee. If that work is not done, productivity will decrease and profits diminish. All of these are mentioned to underscore the importance of maintaining a clear direction, keeping appointments promptly, avoiding idle talk, and meaningless questions. Conducting the business of vocational education judiciously and efficiently can have positive payoffs not always overtly identified.

In instances where several employers are being surveyed, it becomes readily apparent that they are not all alike in their expectations. Getting to the point of knowing what employers' expectations are is important in understanding their level of satisfaction.

Questions should be designed to elicit the employer's background of training and experience, type of organization represented, and expectations for employees. For example, it is important, perhaps, to know that a particular employer is responding from the perspective of believing that every high school student should be required to study Latin. Naturally, that employer's response may be quite divergent from the response of one who finds the entire area of language development useless.

How to pose and phrase questions to reach this level of sophistication is demanding, time-consuming, and otherwise disagreeable. It is, however, potentially crucial for gaining a precise understanding of what employers of graduates are saying.

Analyzing and Reporting Data

Interviews frequently elicit much off-the-record information and information not requested, in addition to the considerable data that are sought; whereas questionnaires that are mailed and returned sometimes omit valuable messages. Regardless of the method used to secure information or the type of information received, the reporting of it is enormously important.

Numbers do not lie. What those numbers say and how they are organized may lead to significant conclusions that ultimately bring about recommendations of great importance.

Employers' negative attitudes and opinions expressed in surveys have a tendency to surface before they can be properly analyzed and reported in context of the whole study—sometimes with damaging results such as hurt feelings, defensiveness, and even retaliatory action. Therefore great caution should be exercised during this stage of the information processing to maintain confidentiality of responses.

Formal reporting of negative survey findings that become quite specific in their analyses may be quite beneficial to the total program and organization, even though they may bring about personnel and program disappointments. In the long run, knowledge of this ostensibly negative outcome may be necessary to generate needed improvement.

On the other hand, when all results are positive and personnel and programs are reinforced, the end result may be an increased sense of worth and improved morale.

Having outside agencies or persons conduct information gathering may serve the organization well. The outside agency has no vested interest and can perform in an unbiased manner. Reporting of results follows the same pattern, and since the outsiders do not have to "live with" members of the organization, greater candor can be expressed. Animosities that may develop are directed to outsiders, and relationships within the organization may be better preserved.

Contracting outsiders to engage in data collection and reporting may detract somewhat from desirable public realtions aspects but, at the same time, it offers potentially better opportunities for higher quality data analyses and reports. Typically, the expense of contracting with outside agencies will be greater; but such an approach has the advantage of not adding to the normal work loads of those who would otherwise be occupied by conducting the study.

Although the various issues and problems surrounding the matter of soliciting employer satisfaction with the graduates of vocational education are numerous, they are not insurmountable. Most can be dealt with when foreseen in advance and considered in the planning that takes place prior to information gathering. Those who work with this type of project regularly would be likely to say that "common sense" dictates what should be done. Unfortunately, "common sense" is useful only when expertise and basic knowledge or understanding are applied in appropriate dosages.

Summary

The importance of the employers of vocational education graduates in evaluation cannot be overemphasized. They are immensely valuable to any program; periodically and frequently they must be contacted in order to gauge their satisfaction with the products of vocational education programs. The products of vocational programs are an integral part of the resources of the enterprises which employ them. Satisfaction with those products can be compared to satisfaction of a consumer with any product placed on the market.

In order for vocational education programs to market their products adequately, surveys of the consumers are a necessary part of the total effort. Well-considered and methodically prepared efforts should result in meaningful assessments, if attention is given to those issues and problems outlined in this chapter.

CHAPTER IV

EMPLOYER SATISFACTION WITH TRAINING AND JOB PERFORMANCE

This chapter identifies and defines differences and commonalities between employer satisfaction with training and satisfaction with job performance of former vocational education students. No attempt has been made to address all aspects of those differences and commonalities. Rather the intent is to highlight only those differences and commonalities that vocational evaluators should address when doing employer follow-up. Specifically, this involves the need to accurately define what data and information reflect the evaluators' follow-up study objectives. In examining some employer follow-up efforts it was found that often the distinction between employer satisfaction with training and with job performance was not defined. This chapter offers information that should help the vocational evaluator make that clarification.

Training Satisfaction and Job Performance

Training Satisfaction

Finding a consistent and valid "working" definition of employer satisfaction with training has been at best a varied and difficult problem. Moreover, there appears to be an emphasis on including satisfaction with job performance, and satisfaction with training as shown in various employer follow-up efforts. For example, the National Center for Educational Statistics' Vocational Education Data System (VEDS) requires that state and local education agencies collect data on vocational program completers and leavers to determine if their employers considered them to be well-trained and prepared for employment. This is defined as an assessment of the performance of vocational education students as compared with performance of persons who have not had vocational education. Figure 1 lists questions required by VEDS in this employer assessment.

In a national review (period of 1970 to 1977) of follow-up instruments, O'Reilly and Asche (1979) found that almost all assessments asked employers to rate each former vocational education student on selected work skills, habits, and attitudinal constructs. Table 1 shows the number and percent of the employer follow-up instruments reviewed by data elements found in selected questions. These findings corroborate those of Gray et al. (1978) who also conducted a national review of follow-up studies focusing on data elements associated with job satisfaction, student satisfaction with training, and employer satisfaction.

Other references to employer satisfaction focus specifically on the vocational program or training. Taken literally, this would imply that the employer will evaluate the vocational curriculum rather than the on-the-job performance of students. The use of this definition presupposes that the employer doing the evaluation has detailed information on the curriculum and will make an on-site review of the vocational program. Very seldom does this occur in a formal sense.

FIGURE 1

VEDS Employer Satisfaction Form

Name _____

I.D. _____

Program Title _____

EMPLOYER FOLLOW-UP FORM

Note: This report is authorized by law (20 USC 2312 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely. No student identifiers will be forwarded to the Federal government.

1. **Vocational Training Evaluation**
Please rate the vocational training received by the individual in the following areas:

	Very Good	Good	Average	Poor	Very Poor
a. Technical knowledge	5	4	3	2	1
b. Work attitude	5	4	3	2	1
c. Work quality	5	4	3	2	1

2. **Overall Rating**
What is your overall rating of the vocational training received by this individual as it relates to the requirements of his or her job?

Very Good	Good	Average	Poor	Very Poor
5	4	3	2	1

3. **Relative Preparation**
As a result of this person's vocational training, how would you rate his or her preparation in relation to other employees in his or her work group who did not receive such training?

	No basis for comparison
(5)	Individual is better prepared
(3)	Both are about the same
(1)	Individual is less prepared

NCES Form 2404, Page 1 of 1. This report is authorized by PL 94-482 (20 USC 2391)

TABLE 1

Employer Follow-Up Instruments by Data Element

*Data Elements**	*No.*	*Percent*
Percent Quality of Work	16	84
Quantity of Work	14	74
Job-Related Technical Knowledge	13	68
Job Skills	10	53
Operation of Tools and Equipment	11	59
Work Habits/Attitudes	8	42
Accept Responsibility	10	53
Punctuality	8	42
Supervision Required	10	53
Cooperation with Coworkers	15	79
Willingness to Learn and Improve	14	74
Cooperate with Management	11	59
Compliance with Roles/Policies	8	42
Attendance	12	63
Overall Satisfactoriness	11	59
Promotability	4	21

Note: Nineteen instruments comprised the sample.

*Data elements refer to the employer's rating of the employee on the characteristic.

Source: O'Reilly, P., and Asche, F. *Follow-up Procedures: A National Review.* Blacksburg, VA: Virginia Polytechnic Institute and State University, 1979

Job Performance Satisfaction*

Job performance is a very complex construct and is not considered to be one concept or trait, but rather a cluster of dimensions. These dimensions have been labeled in various ways, such as level of skills, quality of work, quantity of work, technical knowledge, attendance, punctuality, ability to work independently, cooperation with coworkers and superiors, communication skills, problem-solving skills, interpersonal skills, safety, initiative, attitudes, and so forth. Many would agree that there is no one correct list of job performance skills (McKinney, Gray, and Abram 1978; Smith and Brouwer 1977). The ideal approach is to do a complete job analysis for a specific job and design an instrument for that job.

In relationship to training satisfaction a valuable activity would be to analyze the competencies taught and develop an instrument for that training program. Ideally, there should be a high correlation between the actual tasks on the job and tasks defined in the job analysis. Most often, a small set of general dimensions are identified and applied to all jobs. A compromise is to select an instrument specifically developed for the job being assessed or a similar job. Another alternative is to select an instrument that contains dimensions considered to be meaningful, as judged by someone familiar with the job.

A model of job performance. Job performance is generally thought to be determined by three basic variables: (1) motivation or effort, (2) skill level, and (3) role conception. Effort (how hard the employee works) and skill level (whether or not the employee has the skills to do the job) are self-explanatory. Role conception refers to the employee's idea about what should be done on the job and how the role should be played. If an employee has an incorrect notion of how the job should be done or what activities constitute high performance, then actual performance will be low. Even though the employee may have the abilities and be working hard, performance suffers if effort is put into the wrong activities.

Each of these three determinants has a unique and crucial effect on job performance. That is, if one variable is very low, then performance will be low. Total lack of job skills means low performance, no matter what the motivation level or role concept. In order to analyze the possible effects of vocational education on job performance, we must determine which of these three factors might be altered by vocational training. Figure 2 depicts the factorial relationships of job performance.

Motivation and vocational education. There are too many theories of work motivation to summarize all of them here. However, expectancy theory and goal setting are two major approaches to motivation that dominate current thinking and provide a basic framework for analysis suitable for measuring job performance. Each is briefly discussed.

At present a dominant theory of work motivation currently is expectancy theory (see Campbell and Pritchard 1976, for a comprehensive review). According to this theory, employees are motivated to perform if effort is seen as leading to work outcomes, and if they consider those outcomes desirable. Work outcomes may include extrinsic outcomes (e.g., pay, promotion, relations with coworkers, working conditions) or intrinsic outcomes (e.g., autonomy, feeling of accomplishment, pride in work, enjoyment of the work itself).

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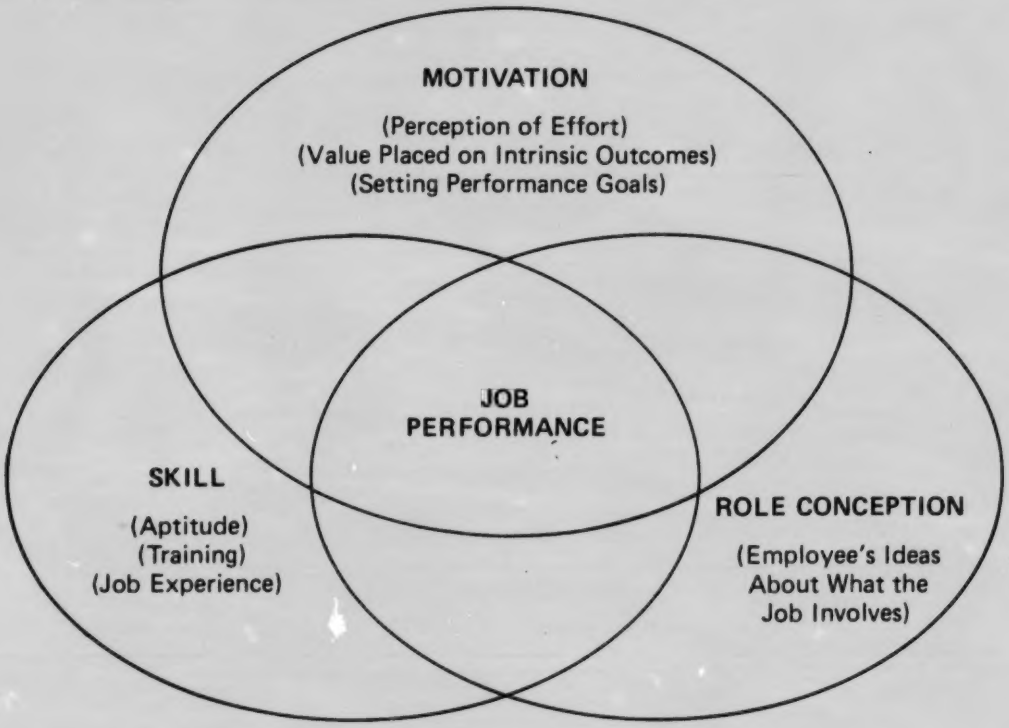
*Adapted from R. S. Billings, "Job Satisfaction and Performance Measures: The State-of-the-Art", in *Interpreting Outcome Measures in Vocational Education: A Final Report*, by F. L. McKinney, K. E. Gray, and M. Abram (Columbus, Ohio: National Center for Research in Vocational Education, 1978), pp. 155-161.

FIGURE 2

A Model of Job Performance



Source: Gray, K.E. et al. *Vocational Education Measures: Instruments to Survey Former Students and Their Employers.* (Columbus, Ohio: The National Center for Research in Vocational Education, August 1978) p. 266.

Thus, vocational education could increase motivation by affecting any or all of these expectancy theory componetns. First, the perception that effort leads to performance might be affected. As students learn how to do the work and become more confident, then they will begin to see that high performance can be attained if the effort is made. The perceived relationship between performance and work outcomes seems less amenable to shaping by vocational education. This perception is affected primarily by the reward system in the organization itself; some organizations reward performance and others do not. The final variable, the value placed on work outcomes, might be affected by vocational education for some outcomes. The value of intrinsic outcomes (e.g., autonomy, pride in work, feeling of accomplishment) seems more likely to be affected than the value of extrinsic outcomes (e.g., pay, praise). In summary, expectancy theory might predict a slight effect of vocational education on intrinsic motivation to perform, if it increased the perception that effort leads to performance and the value of intrinsic work outcomes.

A slightly different approach to motivation has been advocated by Locke (1968). He suggests that performance is determined by the goals a person sets for oneself. Further, the more specific and the more challenging the goal, the higher the level of performance. Finally, the individual must fully accept the goal before it will affect performance.

Using this approach, vocational education may increase motivation and performance by altering the performance goals of the individual. More specific goals may be acquired during training as the student is taught exactly what doing a good job entails. More challenging goals may emerge as job skills and aspiration levels increase. Goals will be accepted more completely as the student understands the reasons behind performance goals and identifies with the occupation.

In summary, vocational education might increase motivation and consequently job performance by (1) increasing the perceived probability that effort leads to performance, (2) increasing the value placed on intrinsic rewards, and (3) heightening the performance goals set by the individual. Unfortunately, many other variables also affect motivation, such as job characteristics, supervisory style, organizational reward systems, value placed on extrinsic rewards, and work group performance norms. Since these are largely unaffected by vocational education, the overall effect of high-quality vocational education on work motivation may be moderate to nonexistent.

Skills and vocational education. The second variable affecting job performance is the skill level of the individual. Vocational education is generally thought to have an impact on job performance primarily by affecting this variable. Although this may be true, the situation becomes more complex when analyzed closely.

Lawler (1973) has suggested that job skills result from underlying aptitudes, training, and direct job experience. Because aptitudes are generally considered to be essentially stable characteristics, vocational education would not be expected to affect job skills through aptitudes. Likewise, experience on the job has an effect on skills apart from the quality of vocational education. Even within the realm of training, vocational education is only part of the story. Important skills are certainly affected by the quality of nonvocational education, hobbies, extracurricular activities, and other nonschool experience. All of this is to say that even though vocational education may affect job skills, it is only one of many factors that affects such skills. Therefore, the effects of vocational education on job performance through job skills may be modest and difficult to identify.

Role conception and vocational education

This is the least studied and least discussed of the variables affecting job performance. Yet it is quite different from the other factors and probably has a significant impact on job performance in many situations. It is not a matter of being motivated to perform well or of having the necessary skills; rather, the idea about what the job entails may differ from the correct model or the one advocated by the organization. For example, the job performance of insurance agents may be rated low if they feel that their job is to serve existing clients and not to develop new customers.

Vocational education may have an impact on students' or graduates' role conception; part of good training may be learning what the occupation entails—which facets are most important and which are of lesser priority. If this effect of vocational education occurs, it is likely to be most noticeable in new employees. Assuming that most untrained employees only learn the proper role concept over time as they gain direct job experience, the graduate of vocational education who has acquired a proper role concept should be more able to step into the job and know with minimal direction what tasks should be done.

Conclusions. There are many determinants of job performance. This seemingly obvious point must not be forgotten, for it implies that the effects of even very good vocational education will be difficult to discern because of "error variance." If all the extraneous factors could be controlled (e.g., individual motives, job characteristics, organizational reward systems, underlying aptitudes, job experience, other training), then the effects of vocational education could be easily and unambiguously determined. In any real-life study, these uncontrolled factors have such a large influence that effects from the factors being investigated cannot be accurately measured.

Several suggestions can be offered. The use of large numbers of subjects can help to tease out subtle effects. Whenever possible, the factor suggested by the model presented here should be measured and controlled. For example, comparing vocational education graduates with nonvocational education graduates within the same job classification, organization, and length of service would control many factors.

On a brighter note, this analysis has suggested several possible mechanisms through which vocational education could affect job performance: increased motivation, better job skills, and knowing what the role entails. Whether or not these things do occur is, of course, an empirical question. However, recognizing the possible causal mechanisms has two important applications.

The program itself should be analyzed for existing effects, and possible improvements in the motivational, ability, and role concept domains. The first step is to examine the goals and conduct of the program. Specific job skills are certainly a central focus, but is it also the intent to increase knowledge of the role and motivation? If so, the discussion above provides some specific guidelines for analysis (e.g., Is self-confidence or perceived effort to performance relations enhanced? Are high performance standards encouraged? Is the importance of the occupation emphasized? Is autonomy encouraged?).

A comprehensive, useful evaluation of job performance of vocational education graduates will not be limited to measuring overall performance; items should deal with contributing elements of motivation, ability, and role concept. Whatever the findings for overall job performance, the administrator will need to know why there was or was not an effect on performance by these other elements. Further, the implications for the content and conduct of the program can be known only if more specific items are included. Imagine that a program is evaluated by measuring the job performance of recent graduates and that they are found to be performing no better than similar employees without

vocational training. What should be done? A likely response would be to try to add to or update the content of the program—that is, try to increase job skills. However, the problem could be low motivation of graduates (e.g., the teacher lowered the students' self-esteem and their perception that effort will lead to improved performance by constantly criticizing) or role concept (e.g., the teacher has an idea of how the job should be done that differs completely from that of the eventual employer). In other words, evaluation of only the overall job performance of graduates may actually be worse than no evaluation at all; without more specific information on motivation, skills, and role concept, the wrong problem could be addressed.

Summary

Vocational education evaluators must explicitly define their employer follow-up information needs. Specifically, the determination must be made as to their need for obtaining data on employer satisfaction with training program(s) or satisfaction with the job performance of the former vocational education students, or both. Once this decision is made the evaluator must operationally define that variable or variables to be evaluated.

As discussed in this chapter, finding a consistent and valid "working" definition of employer satisfaction with training and job satisfaction has been at best a varied and difficult problem. The cluster of concepts or factors associated with "training" are varied. However, by examining the total school curriculum and the school environment those concepts or factors can be identified. Moreover, the measure of awareness or knowledge of those concepts or factors by the employer must be assessed by the evaluator for reliability and validity. The cluster of concepts known as job performance are complex. However, by (1) measuring dimensions of performance which are important for a given job and (2) measuring the causes of performance-motivation, skills, and role concept, a useful and understandable evaluation can be performed.

FIGURE 3

Flowchart for Employer Assessment of Training and Job Performance Study

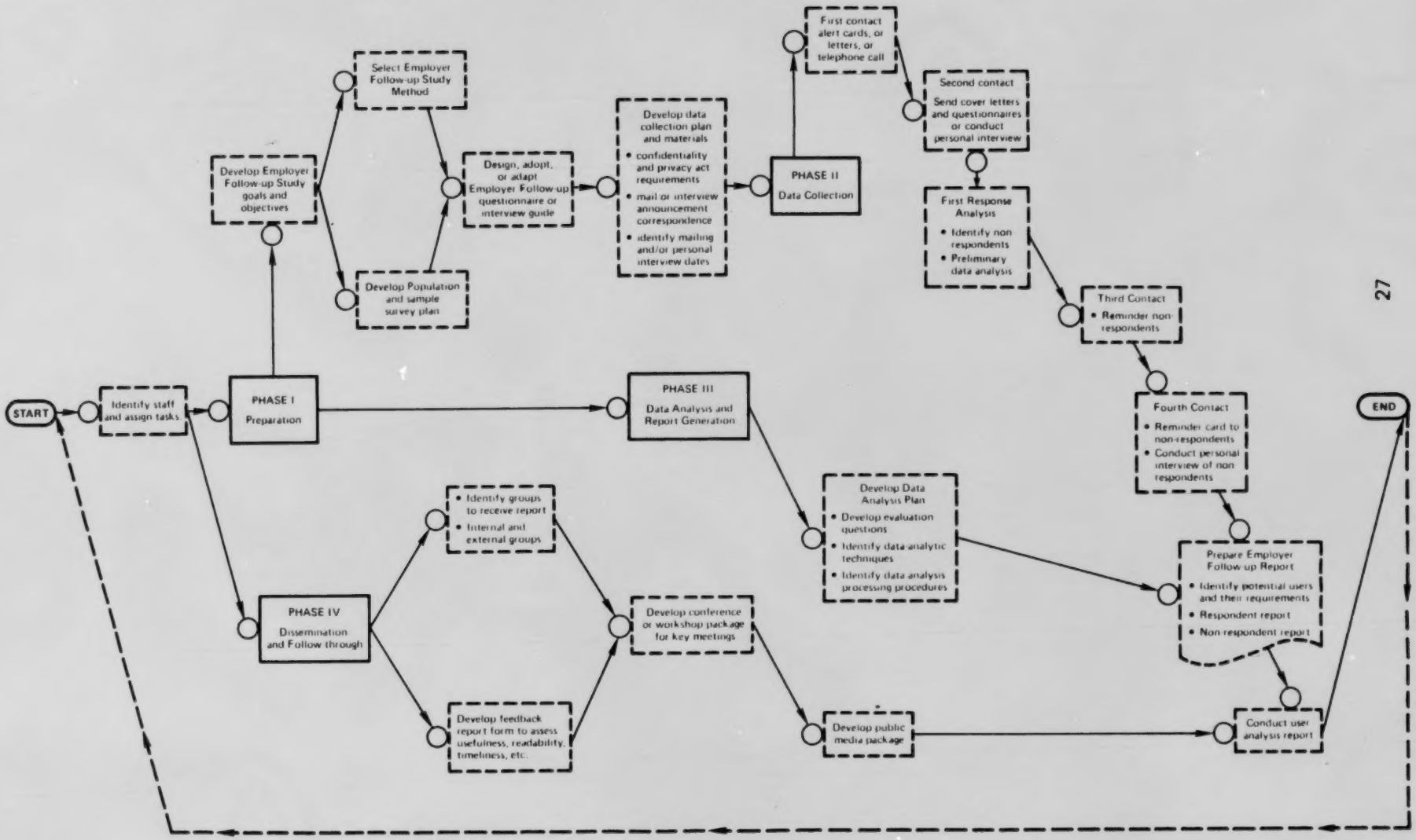

START
Identify staff and assign tasks
PHASE I
Preparation
Develop Employer Follow-up Study goals and objectives
Select Employer Follow-up Study Method
Develop Population and sample survey plan
Design, adopt, or adapt Employer Follow-up questionnaire or interview guide
Develop data collection plan and materials
• confidentiality and privacy act requirements
• mail or interview announcement correspondence
• identify mailing and/or personal interview dates
PHASE II
Data Collection
First contact alert cards, or letters, or telephone call
Second contact
Send cover letters and questionnaires or conduct personal interview
First Response Analysis
• Identify non-respondents
• Preliminary data analysis
Third Contact
• Reminder non-respondents
Fourth Contact
• Reminder card to non-respondents
• Conduct personal interview of non-respondents
PHASE III
Data Analysis and Report Generation
Develop Data Analysis Plan
• Develop evaluation questions
• Identify data analytic techniques
• Identify data analysis processing procedures
Prepare Employer Follow-up Report
• Identify potential users and their requirements
• Respondent report
• Non-respondent report
PHASE IV
Dissemination and Follow-through
• Identify groups to receive report
• Internal and external groups
Develop feedback report form to assess usefulness, readability, timeliness, etc.
Develop conference or workshop package for key meetings
Develop public media package
Conduct user analysis report
END

TABLE 2

Essential Elements of Information for an Employer Follow-Up Study

Checklist of Elements	*Information for this Outcome**
1. Outcome question to be answered:	To what extent do employers consider former vocational students to be well trained and prepared for employment?
2. Outcome hypothesized as the dependent variable:	Satisfactoriness of vocational programs as perceived by employers.
3. Affected entity (student population or other entity in which the outcome is observed):	Employers of former vocational students (as influenced by performance of employees who took vocational education).
4. Program identified as the strategic independent variable:	Secondary and postsecondary vocational programs that purport to impart entry-level job skills.
5. Rationale for hypothesized outcome as a basis for evaluating the program:	To the extent that vocational programs purporting to teach entry-level job skills are successful, they will turn out program completers and leavers who are likely to be considered by their employers to be well trained and prepared for employment.
6. Empirical indicators of the outcome:	Employer ratings of former vocational students. (Legislation specifies the use of employer perceptions as the required empirical indicator.)
7. Methodological considerations (evaluation design, sampling procedures, statistical analysis):	Sampling procedure as used in the state or local evaluation system.
8. Evaluation standard (basis for interpreting outcome data to judge program effectiveness):	Higher ratings for (a) former vocational students than for comparable workers doing the same jobs who did not take vocational education, or (b) the present cohort of vocational students as compared with earlier cohorts.
9. Data requirements (instruments, procedures, data base):	Employer responses to a mail survey at the time of student follow-up. Questionnaire designed by SEA or LEA based on national VEDS, adapted to provide for comparison of vocational students with nonvocational, or supplemented with a second questionnaire to collect data on employees without a vocational background.

Table 2 (continued)

Checklist of Elements	*Information for This Outcome*
10. Feasibility of investigating this outcome (conceptual, administrative, cost, time, other considerations):	The employer ratings of former vocational students will be easily and inexpensively obtained under established VEDS requirements. Validity of responses may be questioned, including employer comparisons of vocational with nonvocational students. A separate survey of employer perceptions of nonvocational students would be difficult and costly.
11. Findings (results of data analysis, warranged inferences, generalizability):	High ratings given by employers to the training and job preparation of the employees can be interpreted as a positive indication of vocational program success. If responses vary by item, school, employer, industry, or occupational program, this can identify potential strengths and weaknesses.
12. Potential impact of findings (implications for policy, program design and management, image of vocational education):	Findings might demonstrate the need for program improvement and, depending on their nature, serve as a demonstration to the educational community, the public, and policymakers that vocational education does indeed make a difference in preparing youth for jobs.
13. Dissemination of findings and suggested applications:	Share procedures, instruments, and results with evaluation research unit and advisory council networks. Other dissemination dependent on findings.
14. Implications of findings of further RD&E activities and relationship of this evaluation to previous studies:	Since this outcome is addressed by VEDS, good opportunities will exist for comparing data-collection procedures, responses, and interpretations of results.

Source: R. L. Darcy. *Some Key Outcomes of Vocational Education: A Report on Evaluation Criteria, Standards, and Procedures.* Columbus, OH: National Center for Research in Vocational Education, The Ohio State University, 1980, pp. 42-43.

CHAPTER V

DESIGNING, PLANNING, AND CONDUCTING EMPLOYER FOLLOW-UP STUDIES

This chapter identifies major decisions and steps required in the design, planning, and conduct of an employer follow-up study. This section is structured around questions and decisions the evaluator must address. No attempt has been made to cover in depth all aspects of follow-up studies or the survey research and evaluation methodology. Numerous textbooks exist providing a thorough treatment; therefore, selected references are made throughout the narrative. Also, other publications in the National Center's Evaluation Handbook series have already addressed those important aspects at length and are referenced for the reader's further information needs. The major contents of this chapter are adapted from the publication, *Evaluation Handbook: Guidelines and Practices for Follow-up Studies,* by S. J. Franchak and J. E. Spirer 1978.

Undertaking an assessment of employer satisfaction centers around four phases: (1) preparation, (2) data collection, (3) data analysis and report preparation, (4) dissemination of results and feedback. Figure 3 presents a flowchart for conducting an assessment of employer satisfaction of training and job performance of former vocational students.

Preparation

The initial task requires an outline of a scope of work and a detailed definition of tasks. Time lines need to be established along with realistic target dates for completion. The assignment of staff requires a careful analysis of tasks to be completed, qualifications of persons, and budgetary constraints. Persons responsible for the follow-up at the local educational agency (LEA) level typically function in the roles of personnel service/guidance and counseling, or in some cases individual teachers take on this responsibility. At the state education agency (SEA) level, personnel located in the research, planning, or evaluation units generally are responsible for the administration and conduct of the assessment process. Table 2 presents a useful guide outlining the major decisions and questions the evaluator must address in conducting an employer follow-up study.

Developing Follow-up Study Objectives

Objectives must be clearly delineated because the assessment that addresses the wrong questions or does not provide adequate information is not successful. The primary purpose of this type of evaluation is to provide information for program improvement and accountability. Results are intended to influence the decision-making process. The employer satisfaction results should answer several questions about vocational education program quality:

1. Administrators and teachers want to know what vocational programs are accomplishing and whether improvements are needed.

2. SEAs and federal agencies need to know whether programs are implemented as intended by the local and state plans.

3. Administrators and teachers considering similar programs want to know what strategies and methods work and why.

Considerations of the potential users of the follow-up results will help in clarifying the specific objectives of the study. Before the final study goals and objectives are developed, the evaluator must determine if the training program and job performance of former students can be evaluated, and if it is feasible to obtain the required information. In other words, has the vocational program addressed those job performance dimensions being assessed by the employer and does the employer have full knowledge of the training curriculum?

Defining the Data Collection Method

Common data collection methods for obtaining employer follow-up information include:

1. Mail survey
2. Telephone interview
3. Personal interview

The questionnaire used in each of these methods includes a list of questions or a request for a summary statement about the former vocational students as employees. Another approach requires asking the employer to respond to a list of questions about an individual employee who has had vocational education training.

The advantages and disadvantages of each method must be considered in light of costs, time, and personnel responsible for collecting the data. The personal interview (case study method) usually provides the most useful and reliable information on a local community or labor market area. But if the sample of employers to be interviewed is large, possibly a statewide area, the time and travel costs may be prohibitive. An alternative would be a telephone survey or a mail survey. The mailed survey is considered most cost effective when the sample is large. However, this method requires many tasks to address the problems dealing with response rates. (These extra efforts could include the preparation and mailing of preaddressed and prestamped envelopes, and provide various monetary incentives to return the instrument.) Dillman (1978) presents an excellent discussion on the advantages and disadvantages of the telephone and mail survey and also provides cost estimates relative to the use of both methods.

A recent statewide effort to conduct an employer follow-up by telephone provides valuable information relative to advantages and disadvantages of using this data collection method (CRW Associates 1980). The reader is encouraged to examine that report.

Identification and Method for Sample Selection

Sample identification and sampling method are critical elements in an employer follow-up study. Sampling, simply defined, is a technique that makes measurement of social phenomena possible. Sampling would not be necessary if the total population (e.g., all employers defined for the purposes of the study) participated in the study. Financial and time constraints generally prohibit population surveys.

A Michigan State Department of Education employer follow-up study provides an excellent example for addressing the sampling problem dealing with employer follow-up. (The reader is referred to the sampling plan developed by S. G. Heeringa (1979) for the Michigan Study.) The sample was selected from employers of those students who indicated on the completer/leaver follow-up (as defined by VEDS) that they were employed in a field related to their vocational training. Excluded from the sample were those students who were self-employed or who were in the military service. A stratified sampling design was used, resulting in the stratification of populations of students and employers by the completion status of students and instructional program in which enrolled.

Generally, three questions must be addressed in arriving at a sampling method.

> First, what procedures can be used to assure that the samples fairly represent the population to which the observations will be atrributed? Second, what can be done to assure that inevitable changes in the samples do not seriously affect their representativeness, and therefore, the quality of estimates of program effect? Finally, how large must the samples be to detect program impact with an adequate degree of certainty (General Accounting Office 1978, p. 15).

Problems of sample attrition and their effect on representatives must be addressed. Changes in the composition of the samples can create differences that seriously bias the study.

The determination of sample size is necessary to achieve the required level of confidence and precision necessary in detecting effects. Heeringa (1979) provides a detailed discussion on establishing sampling rates for the employer follow-up with a discussion on levels of precision and sample size (p. 5-10). A number of textbooks on sampling are recommended for review and consultation. These include: *Social Experimentation* by H. W. Riecken and R. F. Boruch (New York: Academic Press, 1979); *Survey Sampling* bu L. Kish (New York: John Wiley, 1965); *The Sample Survey* by D. P. Warwick and C. A. Lininger (New York: McGraw-Hill, 1975); and *Applied Sampling* by S. Sudman (New York: Academic Press, 1976).

Checklist 3 identified specific questions for helping to develop an appropriate sampling strategy and method.

Identification of or Development of Follow-up Instrument

Designing or adapting an instrument for assessing employer satisfaction with training or former vocational education students' job performance requires answers to a number of questions. The decision to design an instrument or adapt one should be based on the consideration of certain factors. These include such factors as study goals and objectives, data collection methods, cost, and time, just to mention the more obvious.

If the decision is made to develop an instrument for a case study setting or mail-survey setting, adherence to the canons of instrument development are essential. Franchak and Spirer (1978, pp. 34-62) and McCaslin and Walker (1979, pp. 3-6) provide a systematic procedure for developing a mail-survey questionnaire. Spirer (1979, pp. 40-60) provides a similar procedure in developing a questionnaire for use in a case study. Checklist 5 may be used to evaluate the employer follow-up instrument.

CHECKLIST 3

Sampling Procedures

Does your employer follow-up system's sample provide the following?	*Yes*	*Somewhat*	*No*
1. The desired information, accurately, at the desired price?	☐	☐	☐
2. Random sample selection by:			
a) simple random sampling?	☐	☐	☐
b) stratified sampling?			
c) cluster sampling?			
d) systematic selection?			
e) unequal probabilities of selection?			
f) multistage sampling?			
3. Nonrandom sample selection by:			
a) haphazard sampling?	☐	☐	☐
b) judgment sampling?	☐	☐	☐
c) quota sampling?	☐	☐	☐
4. An appropriate sample size statistically defined?	☐	☐	☐
5. Response rate statistically identified?	☐	☐	☐

CHECKLIST 4

Outline of Topics and Questions to be Considered for the Employer Questionnaire

*Importance**		*Feasibility**
_____	I. General Characteristics	_____
	A. Questions pertaining to the respondent	
_____	• business address	_____
_____	• title or position of respondent	_____
_____	• tenure of position	_____
	B. Questions pertaining to the respondent's business establishment	
_____	• type of business	_____
_____	• business function	_____
_____	• location of business establishment	_____
_____	• number of employees	_____
_____	• percentage of total employees by sex, age, minorities, etc.	_____
_____	• number of new employees hired within last twelve (12) months	_____
	II. Young Worker Information	
	A. Questions pertaining to employment of young workers	
_____	• employment of individuals between 16 and 19 years of age	_____
_____	• employment of individuals between 20 and 34 years of age	_____
_____	• number of new employees hired within last twelve (12) months between 16 and 19 years of age	_____
_____	• number of new employees hired within lat twelve (12) months between 20 and 34 years of age	_____

* 5 = very high, 4 = moderately high, 3 = moderate, 2 = moderately low, and 1 = lower.

Checklist 4, continued

Importance		*Feasibility*
____	• problems the employer encounters with young workers	____
____	• young workers' characteristics viewed positively by employer	____
	B. Questions concerning employee training and educational requirements for entry-level positions	
____	• minimum training and educational requirements for entry-level positions	____
____	• level of initial skill training provided to young workers	____
____	• source of training for young workers hired in last twelve (12) months	____
____	• employed individuals who have taken vocational or technical education courses	____
	III. Vocational Education Information	
	A. Attitudes toward vocational education	
____	• degree of importance for public schools to provide opportunities to learn occupational skills	____
____	• degree of emphasis that public schools give to job training through vocational education programs	____
____	• degree of importance for public schools to provide students the opportunities to learn occupational skills	____
____	• degree of emphasis that public schools give to job training through vocational education	____
____	• importance of providing vocational education programs to individuals under 20 years of age	____
____	• importance of providing vocational education programs to individuals between 20 and 34 years of age	____

Checklist 4, continued

Importance		*Feasibility*
	B. Collaboration between business establishment and school	
____	• ways the business establishment works with schools	____
____	• concerns the business establishment has in working with schools	____
	C. Perceptions of the quality of vocational education programs	____
____	• effectiveness of programs in preparing young people for job	____
____	• effectiveness of high school vocational programs in preparing people less than 20 years of age	____
____	• effectiveness of community colleges and technical schools vocational programs in preparing people 20 years of age or older	____
____	• relevancy of vocational programs (secondary, postsecondary, and adult) to industry needs	____
____	• effectiveness (cost-effectiveness) of providing occupational training	____
____	• recommendations for improving the delivery of vocational education	____

CHECKLIST 5

Identifying Critical Factors in Developing the Employer Follow-Up Questionnaire

Do the following statements apply to your follow-up questionnaire?	*Yes*	*No*
Content		
1. The first series of questions gain rapport with the respondent.	☐	☐
2. Ideas are sequenced according to the logic of the respondent.	☐	☐
3. Early questions in a series are constructed so that the accuracy of subsequent responses can be checked.	☐	☐
4. Questions that may be answered in a similar fashion are grouped together.	☐	☐
Appearance		
5. The questionnaire is reproduced on high quality paper.	☐	☐
6. Colored paper or colored ink is used to improve the questionnaire's visual appearance.	☐	☐
7. The questionnaire is printed rather than mimeographed.	☐	☐
Format		
8. The title of the study is displayed near the top of the first page.	☐	☐
9. The name of the sponsoring agency is centered at the top of the first page.	☐	☐
10. Name, title, and complete address of person to whom the form should be returned is included on the first page.	☐	☐
11. Space is provided for the respondent's name and title.	☐	☐
12. Questionnaires are pre-numbered.	☐	☐
13. The purpose of the study is included in an accompanying letter.	☐	☐

An important step in the designir g or adapting of an instrument is to pilot test it with a sample of employers. The purpose of the pilot test is to gain feedback about the draft instrument in terms of its clarity, form, length, layout, and so forth. Erdos and Morgan (1970) provide a very succinct discussion on the pilot study. They state that pilot studies can be divided into several distinct categories by the purpose they serve. These include:

1. Testing the quality of the mailing list
2. Checking the percentages of returns
3. Checking the effectiveness (in producing higher percentages of returns) of various segments of the data-gathering process, such as postcards, advance letters, incentives, and various types of follow-up efforts
4. Checking the occurrence of bias resulting from the wording of cards, letters, and questionnaires
5. Checking on how well questions are understood and answered
6. Checking the usefulness of information received
7. Checking or even establishing a cost estimate (p. 84)

Procedures and Mechanics for Collecting Employer Follow-up Data

Federal legislation such as the Confidentiality and Privacy Act must be taken into account in preparing to collect data on individuals. The primary legislation is the Family Education Rights and Privacy Act (Public Law 93-380, amended by Section 2 of Public Law 93-568). Those responsible for the follow-up study must adhere to the requirements of the Act in the collection of the employer satisfaction data. Each respondent in the study must be assured that information will be held in confidence, and that only aggregate data will be publicly disseminated for the purposes of vocational education program improvement and accountability.

Thorough preparation for employer follow-up data collection is essential. A well-defined data collection plan with specified quality control techniques is essential. No planning, poor planning, or planning not adhered to will result in questionable, if not misleading, results. The quality control techniques are needed to guarantee the integrity of the raw data because errors, omissions, or misinterpretations at that point will bias the statistical analysis (General Accounting Office 1978, p. 23). An example of essential quality control techniques includes personnel training and recruitment to satisfy the goals and objectives of the project.

The amount of training necessary depends upon the initial ability of the staff and the complexity of the tasks. Another technique includes pilot testing of data collection instruments, or interview guides if the case study method is used. Data editing is essential to ensure inadvertent errors do not become a part of the data base. Checks are essential, so that all transcribed observations fall within defined boundaries. These include internal consistency checks for both quantitative and qualitative data. The reader is encouraged to review the California Statewide Longitudinal Study by Sheldon and Hunter (1980) for comprehensive discussion of data editing problems and solutions. Finally, preliminary analyses can be performed during early stages of data collection. Early analyses can help to identify missing or incomplete information, inconsistencies, or other discrepancies in the data. Based on these quality control techniques, anticipated problems may be corrected to increase the probability of meaningful and useful data and information.

Data Analysis Procedures

The identification of this step could appear sooner in the flowchart but was positioned at this point because the employer follow-up instrument return rate mav play a critical role in the process. For example, if the mailed survey method fails to yield an acceptable response rate, the person in charge may have to revert to a contingency plan. Such plans could include reverting to alternative methods of collecting data (personal or telephone interviews) or weighing the data from those instruments which were returned. Another decision to make is whether to use automated or manual data analysis methods, or combination of the two. Franchak and Spirer (1978) present an analysis of these various data processing systems, including their advantages and disadvantages.

The decision of whether to use atuomated, manual, or combination data processing will determine the analysis method. Experience has shown that manual tabulation of data is satisfactory for up to 100 medium-length instruments. Once the number of employer follow-up instruments exceeds 100, it becomes more efficient to use the speed and data manipulation abilities of the computer. Computer consultants or programmers are necessary at this stage. Experience proves it is useful to analyze the data several ways and to prepare several types of data displays for the various types of follow-up reports discussed in the next section.

Writing Employer Follow-up Study Reports

Different audiences have different information needs regarding the follow-up results. For example, states must report follow-up results to the federal government. Vocational school administrators, middle-level administrators, instructors, and staff have an interest in the special needs program follow-up study results. Advisory committee members, special educators, advocacy groups, and the general public also have needs regarding follow-up study results. Franchak and Spirer (1978) present a thorough discussion of follow-up data analysis and reporting procedures, identifying four different types of follow-up reports: (1) highlight report, (2) executive summary, (3) detailed report, and (4) federal report. They also present a useful description of various graphic presentations, including tables, bar graphs, line graphs, and histograms. Follow-up study conclusions and recommendations should be carefully thought out and cleared through appropriate channels before they are included in the final report. Again, different audiences have needs for different types and levels of conclusions and recommendations.

Publication and Printing Considerations

Because the final report represents the vocational school to many people, care should be taken to do a high-quality job on report printing. It may prove useful to explore creative approaches, such as using the folder flyer, booklet, or brochure approach. The added printing expenses may be made up in improved good public relations for the vocational program.

Developing an employer follow-up report evaluation form is an important step that is often overlooked by evaluators. Just as follow-up study results should be used to revise and improve the vocational special needs programs, so too should subsequent final follow-up reports be improved based on feedback provided in the report evaluation forms. These evaluation forms should be short and relatively simple. They could be included in the printing of the final report as tear-out sheets, or they could be single sheets that may be folded and mailed back.

Disseminating Follow-up Reports

Concerned audiences include but are not limited to: state-level needs personnel, project funding officers, regional office of vocational bureau, vocational school administrators, advisory committee members, special education administrators, classroom/laboratory instructors, and other educators interested in the special needs program. A news release should be prepared for the news media, with invitations to inspect the full final report. State and national professional organization members may be interested in the report, and appropriate availability notices should be sent to their house organs and national magazines. A distribution list should be maintained for the file and for the information of the vocational school director. Last, the report evaluation forms should be collected, analyzed, and results tabulated for improving the next year's reports.

APPENDIX

ASSESSMENT OF EMPLOYER SATISFACTION WITH TRAINING AND JOB PERFORMANCE

TO THE EMPLOYER: Please ask the person in your organization who has most direct responsibility for the hiring and supervising of personnel with less than a college degree to answer the questions below. This information is confidential; no data will be associated with the name of an individual or business establishment.

1. Address _____

2. City _____ State _____ ZIP code _____

3. Title or Position of Person Completing this Questionnaire: _____

4. How long in this position? (number of years) _____

5. Type of Business:

   ☐ Individual Proprietorship
   ☐ Partnership
   ☐ Cooperative Association
   ☐ Governmental (please specify)_____
   ☐ Corporation
   ☐ Other (please specify)_____

6. How would you describe the major activity of your business establishment?

   ☐ Agriculture
   ☐ Mining–Extractive
   ☐ Construction
   ☐ Durable Manufacturing
   ☐ Transportation/ Communication Utilities
   ☐ Wholesale or Retail Trade
   ☐ Finance, Insurance, Real Estate
   ☐ Service
   ☐ Other (please specify)_____

7. Where is your plant or business establishment located?

   ☐ Rural
   ☐ Suburban
   ☐ Small City (less than 50,000 population)
   ☐ Urban (more than 50,000 population)

8. What is the approximate average number of employees in your organization during the last twelve (12) months?

   ☐ 1 – 9
   ☐ 10 – 49
   ☐ 50 – 59
   ☐ 100 – 499
   ☐ 500 – 999
   ☐ 1,000 – 4,999
   ☐ 5,000 – 9,999
   ☐ 10,000 or more

9. Approximately what percentage of your total employees are:

   A. Teenage Workers (16-19 years of age) _____ %
   B. Younger Adult Workers (20-30 years of age) _____ %
   C. Minorities _____ %
   D. Females _____ %
   E. Union Members _____ %

10. Approximately how many new employees did your firm hire *during the last twelve (12) months?*

☐ None ☐ 10 – 24 ☐ 50 – 99 ☐ 500 or more
☐ 1 – 9 ☐ 25 – 49 ☐ 100 – 499

11. Does your business establishment employ individuals between the ages of 16 and 19?

☐ Yes ☐ No

12. Does your business establishment employ individuals between the ages of 20 and 34?

☐ Yes ☐ No

If your business establishment does not employ individuals between the ages of 16 and 34, you may stop here and return the questionnaire.

If your business does employ individuals between the ages of 16 and 34, please continue answering this questionnaire.

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13. Of the new employees hired in the last twelve (12) months, how many were workers under the age of 20?

☐ None ☐ 10 – 24 ☐ 50 – 99 ☐ 500 or more
☐ 1 – 9 ☐ 25 – 49 ☐ 100 – 499

14. Of the new employees hired in the last twelve (12) months, how many were young workers between the ages of 20 and 34?

☐ None ☐ 10 – 24 ☐ 50 – 99 ☐ 500 or more
☐ 1 – 9 ☐ 25 – 49 ☐ 100 – 499

15. Which of the following are serious problems with a substantial number of new employees in your business?

☐ Lack of basic skills, literacy, etc.
☐ Lack of job skills and knowledge
☐ Lack of acceptable work values, habits, attitudes, and motivation
☐ Lack of job/work discipline
☐ Excessive tardiness and absenteeism
☐ Failure to comply with company policies, procedures, etc.
☐ High turnover
☐ Inflexibility
☐ Excessive use of alcohol, drugs, etc.
☐ Poor personal relationships with other employees
☐ Low productivity
☐ Inability to follow-through on assignments
☐ Abuse/theft of business property
☐ Inability to work without constant supervision
☐ Other (please specify) _____

16. What are the minimum training and educational requirements for most entry-level positions in your business?

- ☐ None
- ☐ High school diploma
- ☐ GED or other high school equivalent
- ☐ Some skill training in vocational or technical education
- ☐ Completion of a course of study in vocational or technical education
- ☐ Demonstration of competency
- ☐ Competency certificate
- ☐ Previous work experience
- ☐ Community college or technical school
- ☐ Other (please specify) _____

17. How much and what kinds of initial skill training does your organization usually provide to young workers that do not have a baccalaureate degree?

	Amount of Training (in days)						
Kind of Training	Less than 1	1-3	4-5	6-10	11-15	More than 15	continuous ongoing
On-the-job training	☐	☐	☐	☐	☐	☐	☐
Vestibule	☐	☐	☐	☐	☐	☐	☐
Simulation	☐	☐	☐	☐	☐	☐	☐
Classroom	☐	☐	☐	☐	☐	☐	☐
Off-site training, Tuition-rebate	☐	☐	☐	☐	☐	☐	☐
Off-site training, Tuition-subsidized	☐	☐	☐	☐	☐	☐	☐
Apprenticeship _____							
Other (please specify) _____							

18. Do more than 50 percent of your younger workers hired in the last twelve (12) months have:

		Yes	*No*
(a)	Secondary vocational school training?	☐	☐
(b)	Community college or technical school training?	☐	☐
(c)	Private school training?	☐	☐
(d)	College or university training?	☐	☐
(e)	Prior work experience related to the job?	☐	☐
(f)	Prior work experience not related to the job?	☐	☐
(g)	Apprenticeship training?	☐	☐
(h)	No special training?	☐	☐

19. Has your business establishment employed individuals within the last twelve months who have taken vocational or technical education programs?

☐ Yes ☐ No

If yes, please continue questionnaire.

If no, you may stop here and return the questionnaire.

---

20. How important is it for the public schools to provide students less than 20 years of age, the opportunities to learn occupational skills?

☐ Very important ☐ Not too important ☐ Don't know
☐ Somewhat important ☐ Not important at all ☐ No opinion

21. How much emphasis do you think public schools should give to job training through vocational education programs (preparation of students for a specific occupation) for individuals less than 20 years of age?

☐ More emphasis ☐ Less emphasis ☐ Don't know
☐ Same emphasis ☐ No opinion

22. How important is it for the public schools to provide students age 20 and over the opportunities to learn occupational skills?

☐ Very important ☐ Not too important ☐ Don't know
☐ Somewhat important ☐ Not important at all ☐ No opinion

23. How much emphasis do you think the public schools should give to job training through vocational education programs for individuals age 20 and over?

☐ More emphasis ☐ Less emphasis ☐ Don't know
☐ Same emphasis ☐ No opinion

24. Please indicate the relative importance of each of the following in providing vocational education through the public schools for individuals *under 20 years of age.*

Importance: *Low*	*High*	
☐	☐	Add programs, so that more students can enroll.
☐	☐	Improve, update, and upgrade the programs currently offered.
☐	☐	Improve opportunities for the handicapped to receive vocational education.
☐	☐	Improve opportunities for low-income students to receive vocational education.
☐	☐	Improve opportunities for females in vocational education.
☐	☐	Assure that individuals who don't go on to college have marketable skills.
☐	☐	Provide work experience for vocational students.
☐	☐	Support economic development.
☐	☐	Provide nontraditional (by sex) training.

25. Please indicate the importance of providing vocational education programs to individuals *between 20 and 34 years of age.*

Importance: *Low*	*High*	
☐	☐	Add programs, so that more students can enroll
☐	☐	Add programs, to provide training in more occupations.
☐	☐	Improve, update, and upgrade the programs currently offered.
☐	☐	Improve opportunities for the handicapped to receive vocational education.
☐	☐	Improve opportunities for low-income students to receive vocational education.
☐	☐	Improve opportunities for females in vocational education.
☐	☐	Assure that individuals who do not go on to college have marketable skills.
☐	☐	Insure that older individuals have access to training for entry or reentry into the job market.
☐	☐	Provide opportunities to learn at the business site.
☐	☐	Support economic development.
☐	☐	Provide nontraditional (by sex) training.
☐	☐	Upgrade present workers with continuing education classes.
☐	☐	Provide work experience for vocational students.

26. In which of the following ways does your business work with schools to support vocational education? (Please check all that apply.)

High Schools/ Vocational Centers	Community Colleges/ Technical Schools	
☐	☐	Suggesting new vocational courses
☐	☐	Recommending what to teach in vocational courses
☐	☐	Recommending equipment and materials to be used
☐	☐	Providing equipment and materials
☐	☐	Designing facilities
☐	☐	Providing facilities
☐	☐	Providing vocational students with work experience
☐	☐	Reporting employment status of vocational graduates
☐	☐	Evaluating vocational graduates' job performance
☐	☐	Serving on advisory committees
☐	☐	Providing teachers with work experience
☐	☐	Recommending vocational teachers
☐	☐	Releasing employees to teach vocational courses
☐	☐	Providing training programs for the education community
☐	☐	Providing training for apprentices
☐	☐	Providing training for journeymen

	Very Good	Fairly Well	Not Too Well	Not Well At All	Don't Know
27. How well do the programs offered in your area prepare young people for jobs?					
(a) Vocational education high schools	☐	☐	☐	☐	☐
(b) General education high schools	☐	☐	☐	☐	☐
(c) Community colleges or technical schools	☐	☐	☐	☐	☐
(d) Proprietary schools	☐	☐	☐	☐	☐
28. How well do you feel the *high school* vocational programs offered in your area prepare people (less than 20 years of age) in each of the following?					
(a) Specific occupational skill	☐	☐	☐	☐	☐
(b) Basic literacy skills	☐	☐	☐	☐	☐
(c) Problem solving	☐	☐	☐	☐	☐
(d) Decision making	☐	☐	☐	☐	☐
(e) Self-directed learning skills	☐	☐	☐	☐	☐
(f) Acceptable work habits	☐	☐	☐	☐	☐
(g) Acceptable work attitudes	☐	☐	☐	☐	☐
(h) Acceptable work values	☐	☐	☐	☐	☐
(i) Job application skills	☐	☐	☐	☐	☐
(j) Other (please specify:) _____	☐	☐	☐	☐	☐
29. How well do you feel the *community colleges and technical schools* vocational programs offered in your area prepare people (ages 20 and over) in each of the following?					
(a) Specific occupational skill training	☐	☐	☐	☐	☐
(b) Basic literacy skills	☐	☐	☐	☐	☐
(c) Problem solving	☐	☐	☐	☐	☐
(d) Decision making	☐	☐	☐	☐	☐
(e) Self-directed learning skills	☐	☐	☐	☐	☐
(f) Acceptable work habits	☐	☐	☐	☐	☐
(g) Acceptable work attitudes	☐	☐	☐	☐	☐
(h) Acceptable work values	☐	☐	☐	☐	☐
(i) Job application skills	☐	☐	☐	☐	☐
(j) Other (please specify:) _____	☐	☐	☐	☐	☐

30. Please check any of the following concerns you have had in working with instructional and training agencies:

High School	Community College/ Technical School	Proprietary School	CETA Programs	
☐	☐	☐	☐	They are not interested in working with business and industry.
☐	☐	☐	☐	Conflicts or disagreements on goals.
☐	☐	☐	☐	Conflicts or disagreements over personalities.
☐	☐	☐	☐	Conflicts or disagreements on policies or regulations.
☐	☐	☐	☐	Inadequate turnaround time to meet the needs of business and industry.

31. How current are the vocational programs in your community?

	Completely Up-to-date	Moderately Up-to-date	Somewhat Out-of-date	Entirely Out-of-date	Don't Know
High Schools					
(a) Course content	☐	☐	☐	☐	☐
(b) Physical facilities	☐	☐	☐	☐	☐
(c) Tools and equipment	☐	☐	☐	☐	☐
Community Colleges or Technical Schools					
(a) Course content	☐	☐	☐	☐	☐
(b) Physical facilities	☐	☐	☐	☐	☐
(c) Tools and equipment	☐	☐	☐	☐	☐

32. In your local school district, would you, as an individual, be willing to pay more taxes to support an increased emphasis on vocational education?

☐ Yes ☐ No

33. What would be your main suggestion on how to improve vocational education programs in your community?

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GLOSSARY

Some of the words used in the employer follow-up studies elude precise and clear definition. Those definitions that follow are intended to clarify the overall focus on the employer follow-up studies, but go beyond the definitions needed in doing this type of follow-up. Moreover, they are presented as a "definitational base" for which the comprehensive evaluation of vocational education, of which employer follow-up studies are considered as an integral part. They are not "carved in stone" and should not be interpreted so as to foreclose alternative, potentially valuable definitions.

A number of the definitions that follow were taken from the *Federal Register,* Vol. 42, No. 191 – Monday, October 3, 1977, and pertain to all sections of the Education Amendments of 1976, Title II. Vocational Education; documentation pertaining to the National Center Educational Statistics' Vocational Educational Data System, and the National Occupational Informational Coordinating Committee's *Glossary of Terms and Definitions Used in an Occupational Information Program, 1978.*

Attitude: A relatively enduring system of affective evaluation reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or class of objects (Shaw and Wright 1967, p. 10).

Belief: The emotional acceptance of a proposition or doctrine on what one considers to be adequate grounds (English and English 1958, p. 64).

Civilian labor force: All civilians sixteen years of age and over who are classified as either employed or unemployed.

Completer (of a Vocational Education Program): A student who finished a sequence of courses, services, or activities designed to meet an occupational objective which purports to teach entry-level skills (Section 104.404, Vocational Education Amendment Act, 1976).

Cooperative education: A combination program of vocational study and practice for persons through written cooperative arrangements between school and employer. The program offers instruction, including required academic courses and related vocational preparation, by alternating study in school and supervised on-the-job training (Vocational Education Amendment Act, 1967; Handbook VI, modified).

Course: An instructional unit of area or field, or organized subject matter and related learning experiences usually provided for the instruction of students on a quarter, semester, year, or other prescribed length-of-time basis. It can be offered for credit or noncredit (Handbook VI, modified).

Data: Things down or assumed; facts or figures from which calculations can be inferred; basic elements of information (Webster's New World Dictionary, 1967).

Data base: A collection of data files which contain information usually related to a common application.

Demographic information: Describes the population within a specified geographic area in terms of number, age, ethnic composition, sex, work status, and/or other pertinent information.

Dual labor market: A dual labor market consists of primary and secondary occupations based on distinctions of race, sex, and age. Primary occupations are characterized by high job stability, clearly defined career patterns, and a high degree of work involvement. Secondary jobs are unstable and alienating. The dual theory cuts across traditional occupational categories and groups.

Duration of unemployment: The period of time elapsed between a person's losing a job and obtaining another one.

Employed labor force: All persons who do any work at all as paid employees in their area, professional business, or firm; or who work fifteen hours or more as unpaid workers on a farm or in a business operated by a family member; and all persons who are not working but have jobs or businesses from which they are temporarily absent whether or not they received pay for time off, or were looking for other jobs (U.S. Census).

Employee: A person hired by another or by a business, firm, etc. to work for wages or salary (Webster's New World Dictionary, 1967).

Employer's specifications: Required skills, knowledges, aptitude, attitudes, training, or education, personal appearance, and job prerequisites (such as license, certificate, union membership, etc.) demanded or desired of an applicant by employer.

Employment Training: Training designed to enhance the employability of individuals by upgrading basic skills through such courses as remedial education, work-orientation, English as a second language, or training in the primary language of persons of limited English usage; may be offered as part of institutional training (Public Law 93-203. Amended).

Entrants (Labor Force): Persons who become part of the labor force, may be new to the labor force, or may be reentering after a period spent outside the labor force. For a state or area, entrants may include migrants in the state area.

Full-time employed: Persons working thirty-five hours or more per week (United States Census).

Job: A position or employment situation; work, either paid or unpaid.

Job duties: The specific tasks the worker performs to accomplish the overall job purpose of an occupation (DOT modified).

Labor force participation rates: The percent of the total population sixteen years of age or older which is actually in the labor force (i.e., meet the criteria of employed and unemployed).

Labor market: The entire set of interlinked institutions and processes that determine the flow of the job opportunities and labor supply in both the short and long run.

Leaver (of a Vocational Education Program): A student who has been enrolled in and has attended a vocational education program and has left the program without completing it; also includes those who leave the program voluntarily before completion, but leave with marketable skills, i.e., will be capable of obtaining and performing the job for which preparation was directed (Vocational Education Act, modified Section 104.404).

Local Education Agency (LEA): Any public authority legally constituted within a state to perform a service function for public elementary or secondary schools in a city, county, township, school district, or other political subdivision of a state (Section 160 c.2, P.L. 93-380); any public education institution or agency having administrative control and direction of a vocational education program (Vocational Education Act, Section 108[9]).

Management information: Data, statistics, information used for free and objective decision processes and policy formation.

Management Information System (MIS): An organized method of providing past, present, and projected information relating to internal operations and external intelligence which supports the planning, control, and operational function of an organization by providing decision makers with uniform information in the proper time frame (Kennevan, Walter, "MIS Universe," Data Management Vol. 8, September 1970, pp. 62-64).

Marketable skills: Competencies in a specific occupation or cluster of related occupations obtained by persons through training or other job preparation which meet the hiring specifications of local employers.

Nonresponse: In sample surveys, the failure to obtain information from a designated individual for any reason (death, absence, refusal to reply). The proportion of such individuals of the sample aimed at is called the nonresponse rate. It would be better, however, to call this a "failure" rate or a "non-achievement" rate and to confine "nonresponse" to those cases where the individual concerned is contracted but refuses to reply or is unable to do so for reasons such as deafness or illness (Kendall and Buckland, 1971, p. 105).

Occupation: The name or title of a job which identifies and specifies the various activities and functions to be performed.

Occupational objective (Education): The expected outcome of training and other preparation as stated by an individual student. The objective usually is stated in terms of specific occupational title.

Opinion: A belief that one holds to be without emotional commitment or desire, and to be open to reevaluation since the evidence is not affirmed to be convincing (English and English 1958, p. 358).

Pilot survey: A survey, usually on a small scale, carried out prior to the main survey, primarily to gain information to improve the efficiency of the main survey. For example, it may be used to test a questionnaire, to ascertain time taken by a field procedure, or to determine the most effective size of sampling unit (Kendall and Buckland 1971, p. 114).

Placement: A position obtained by a person in an area of unsubsidized employment either as a result of his/her own efforts after intake service or by referral to a job by the school or public employment service.

Program: Program (or project) is defined to include instructional programs as well as legislative purpose programs. An instructional program is a planned sequence of courses, services, or activities designed to meet an occupational objective. These programs are defined by the OE six-digit codes and include industrial arts programs and nongainful consumer and homemaking programs. A legislative purpose program is a course, service, or method of instruction which does not necessarily provide vocational skill training as a primary focus, but which formally is organized by the state in response to legislative priorities (Policy Memorandum—BOAE DSVPO —FY9-2 Department of Health, Education and Welfare, Office of Education, Bureau of Occupational and Adult Education. Sent by: Charles H. Buzzell, Association Commissioner BOAE, April 1979).

Qualitative data: Detailed descriptions of situations, events, people, interactions, and observed behaviors; direct quotations from people about their experiences, attitudes, beliefs, and thoughts; and excerpts or entire passages from documents, correspondence, records, and case histories (Patton 1980, p. 22).

Quantitative data: As contrasted with "qualitative" data, should relate to data in the form of numerical quantities such as measurements or counts. It is sometimes, less exactly, used to describe material in which the variables concerned are quantities, e.g., sex, nationality, or commodity (Kendall and Buckland 1971, p. 121).

Sampling frame: The list, reasonable facsimile, of elements from which a probability sample is selected. Lists include organization lists, high schools, industries, etc. (Babbie 1979, p. 175).

Sampling unit: An element or set of elements considered for selection in some state of sampling. Examples of sampling units are census blocks, households, adults, etc. Primary sampling units, secondary sampling units, and final sampling units would be used to designate the successive stages (Babbie 1979, p. 175).

Specific Vocational Preparation (SVP): The amount of time required to learn the techniques, acquire information, and develop the facility needed for average performance in a specific job-related situation. This training may be required in a school, work, military, institution, or a vocational environment. It does not include the orientation training required by a fully qualified worker to become accustomed to the special conditions of any new job. Specific vocational training includes training given in any of the following circumstances:

1. Vocational education
2. Apprentice training
3. In-plant training
4. On-the-job training
5. Essential experience in other jobs

Student (Vocational Education): An individual with a vocational objective who is enrolled in a vocational education program leading to entry or progress in a chosen occupational field.

Value: Degree of worth ascribed to an object or activity (English and English 1958, p. 576).

ANNOTATED BIBLIOGRAPHY

Employer Satisfaction

Baratta, M. K. *Employer Evaluation of 1975-76 Occupational Graduates.* Palos Hills, IL: Moraine Valley Community College, 1977. (ED 156 234)

Purposes of this employer follow-up of the Moraine Valley Community College (MVCC) occupational program graduates were to determine (1) the degree to which graduates possessed the necessary human relations abilities, communication skills, problem-solving skills, and technical and life skills to function effectively in their positions; (2) graduates' work attitudes,performance quality and output quantity; (3) the relationship of MVCC achievement to employer evaluation; (4) strengths and weaknesses in MVCC occupational program areas, and (5) employers' willingness to hire additional MVCC graduates.

Data were collected by using the questionnaire mailed to 121 employers who hired 131 graduates from business, health science, technology, and public service programs. Employers were asked to rate employees' various skills by checking the descriptors they considered most applicable: *excellent, good, fair, poor,* and *not applicable.* The rating questions were given under classified sections: (1) *human relations abilities*—cooperating with fellow workers to get job done; (2) *communication skills*—organizing thoughts in writing; (3) *technical skills*—handling equipment or instruments with speed; (4) *problem-solving skills*—budgeting time for carrying out the various work activities; and (5) *life skills*—adapting to new situations.

Employers were also requested, using the same scale, to assess the overall attitude toward work; the overall suitability for the kind of job held; the ability to meet job quality demand and the work-output quantity. Apart from this, assessment employers added comments such as: "This business graduate is a very good worker, works at a steady pace, has very good organization, and gets along with other workers," and "I feel this technology employee lacks in organizational patterns, which should improve with experience in time to come."

Findings were as follows: (1) Composite evaluation was consistent with the 1975 ratings. Employers rated MVCC training as good. Public service graduates received the highest composite rating. (2) On human relations skills evaluation, public service graduates obtained more good-excellent ratings from their employers than graduates of other programs. (3) On communication skills evaluation, the composite rate was Good. Health science graduates obtained more good-excellent ratings than graduates of other programs, an improvement from their 1975 ratings. (4) On technical-skills evaluation, the composite rate of four various occupational program graduates was good. Business program area graduates got good-excellent ratings, but this was the only program that received the same rating for all aspects of technical skills. (5) On problem-solving skills evaluation, the composite rating for all graduates was good. Public service graduates had more good-excellent rating values than other program graduates. (6) On life-skills evaluation, the composite rate for all program graduates was good-excellent. (7) On general-statement evaluation, MVCC occupational graduates were rated good-excellent with respect to quality of work, quantity of work, overall suitability, and overall attitude. (8) As to the relationship

of MVCC achievement to employer's evaluation, it was found that favorable evaluations on human relations skills, problem-solving skills, life skills, quality of work, quantity of work, and a composite evaluation tended to be associated with graduates' good G.P.A.T.s. It was indicated that 85 percent of the employers would hire more MVCC graduates based on their present satisfactory experience with MVCC graduates.

Blackford, B.; Ruch, R.; Ahearn, J.; and Seymour, C. "Why Johnny Can Work: An Analysis of Employers' Ratings of Secondary Area Vocational-Technical Center Graduates." Pontiac, MI: Northeast Oakland Vocational Educational Center, 1979.

The stated purpose of the study was to obtain a measure of how vocational graduates compare with other entry-level employees in terms of the hiring considerations which employers feel are important and in terms of specific occupational skills and attitudes. A sample was selected consisting of recent graduates from all program areas. Their employers were identified and interviews were held. The employers were asked to rate the vocational education graduates on hiring considerations, skill preparation, job productivity, basic skills, decision making, and other factors. Employers were also asked to compare these ratings with those they felt they would give other entry-level employees who were not vocational education graduates. Findings were that vocational education graduates consistently were rated higher than other entry-level employees in all areas, although graduates from some program areas were evaluated higher than others.

Feltsehausen, J. L. et al. "Follow-Up Report on Illinois 'Class of '71' Occupational Program Alumni, Final Report." Charleston, IL: Eastern Illinois University, Center for Educational Studies.

The stated objectives of the study were to develop a follow-up data system and to test the system by conducting an extensive follow-up study of the relationship between occupational programs and labor market experiences. Respondents included all 1971 occupational program graduates from 20 percent of Illinois schools and their employers. Employer satisfaction with training was made operational by employers rating how well the graduates were prepared in fifteen employment aspects. Over 73 percent of employers found the graduates to be well prepared in all aspects. There was a high correlation between the graduates, job satisfaction, and employer ratings of preparedness.

Gell, R. L., and Jones, R. F. *The Employers II: A Survey of Employers Who Have Hired Career Program Graduates of Montgomery Community College.* Rockville, MD: Montgomery College, Office of Institutional REsearch and Analysis, 1975. (ED 112 997).

This study was a continuation of an annual follow-up study of employers. Purposes of the study, initiated in the fall of 1973, were (1) to identify employers' attitudes toward hiring Montgomery Community College graduates, and (2) to involve employers in the evaluation process of college programs.

Data were collected from seventy-seven employers who had hired career curriculum graduates of the 1974 class of the Montgomery Community College. Employers were surveyed to indicate whether they preferred to hire a prospective employee with an associate degree or a person without a degree but with some college education. They were also asked to comment on the probability of promotion for a degree-holding graduate based on the five-point scale: 1—*never*, 2—*unlikely*, 3—*sometimes*, 4—*usually*, and 5—*always*. Evaluations of graduates' program training, as well as job preparation, was another focus of the study. Employers were asked: Based on your own experience in supervising a

Montgomery College graduate, please indicate how adequate the co'lege preparation was in job skills, communication ability, overall work attitude, and so forth, using the four-point scale: 1—*inadequate,* 2—*adequate,* 3—*more than adequate,* and 4—*not observed.*

Findings were as follows: (1) the majority of the employers indicated that the associate degree was not essential for job entry, and they did not give preference to a person who had an associate degree over a person without a degree; (2) employers considered earning an associate degree while on the job an enhancement to promotional chances in terms of job position, responsibilities, and tasks; and (3) the overall job preparation and performance were viewed by employers as adequate to more than adequate; however, employers indicated that the significant weakness shared by most of the employees was their lack of familiarity with the machines and equipment used in the offices.

An overall conclusion was that the findings of this study were virtually identical to those of a similar employer survey conducted in 1973.

Gustafson, R. A., and Groves, P. M. *How New Hampshire Employers Evaluate Their Employees—Implications for Vocational Education.* Keene, NH: Keene State College, 1977. (ED 149 030)

Objectives of the research were (1) to identify employers' expectations of employees' nonvocational skills, and (2) to determine current employer practices in evaluating the prior and after-employment performance of personnel in New Hampshire.

Data were gathered by using personal interviews with twenty-three employers from businesses and industries of different sizes and in varying geographic locations across the state of New Hampshire. Employers were interviewed to obtain responses to a standard set of prepared questions such as: "Does your company/organization use a written evaluation form which deals with the performance of your employees? If so, could we have a sample copy?" and "When hiring new personnel, what six basic factors do you consider most important?" In addition, employers were asked to rank the relative importance of ten work attitudes by using five criteria: *extremely important, important, very important, not important, definitely not important,* or *does not apply.* The ten factors included trainability, self-confidence, respectfulness, trustworthiness, optimism, working flexibility, responsibility, honesty, ambition, and cooperation.

Findings were as follows: (1) Graduates who know their career goals, who are confident of their qualifications, and who have cultivated human relations skills will impress the interviewer favorably and be more successful in obtaining a job. (2) In regard to the after-employment performance review, personal and attitudinal performances were considered as important as cognitive and psychomotor skills. Affective domain competencies appear to be more important when employees who hold salaried positions are being evaluated. (3) Among the ten working habits, employers rated trustworthiness, and working flexibility highest in terms of importance while cooperation, respectfulness, and personal appearance were close seconds. Employers commented that an applicant should first try to impress the personnel receptionist, who will sometimes "code" the application form with brief general impressions of applicants and sometimes will decide either to pass applicants on to personnel or to file the applications. It was further commented that applicants should grasp the chance to convince the personnel manager during the general interview of their necessary qualifications. While being apprised of specific job skills by department supervisors, applicants should not only try to emphasize personal training skills but should also reflect an enthusiastic interest in the work and a willingness to work hard. Personality traits often play an important role in getting a job.

An overall conclusion was that if vocational program graduates are to be fully prepared for entering and maintaining employment, a more substantial instructional effort in teaching desirable work attitudes and interpersonal relations is necessary.

Hamburger, M., and Wolfson, H. E. *1000 Employers Look at Occupational Education.* New York: Board of Education of the City of New York, July 1969.

This was the first in a series of studies planned to provide a sound base for curriculum redevelopment in the occupational education programs of the New York City Board of Education. The objectives of the overall plan to make fundamental changes in occupational education were as follows: (1) to improve the curriculum, (2) to extend occupational education to more youth, and (3) to introduce a multilevel approach with a variety of time and sequence organizations.

This study was designed to survey employers in an effort to determine how to prepare a greater number and variety of young people for better jobs. Effective questions to be asked were discussed in workshops —one composed of leaders from industry, commerce, labor, and education; the other composed of administrators, supervisors, and teachers in the New York City schools.

This project was conducted from February 1 to June 30, 1968, following a long planning period. From all the occupational areas in New York City, a sample of curricular areas was selected based on diversity, importance, projected growth, and adaptability to a variety of school plants and organizations. The five areas selected—business, health, automotive, metalworking, and electrical/electronics—included predominantly male, predominantly female, and mixed occupations.

They include also a range of skill levels . . . a balance between white- and blue-collar, between industrial and service, and between stable and rapidly changing fields. Firms of various sizes were selected from each category. Interviews were held with 1056 employers, with usable data obtained from 994. The final sample was not chosen through a rigorous sampling plan, but rather was based on the criteria stated above and on availability and cooperation. The authors note, therefore, that what was done was a case study of selected employers, rather than a study of a random sample. Interviews were held with presidents, managers, personnel directors, and production supervisors.

Project staff prepared an open-ended questionnaire and interview guide but, after using it, decided that a more objective approach would be more fruitful. The instrument was then redesigned. The redesigned questionnaire, which is provided in an appendix, basically follows a checklist format, although open-ended comments related to each question are sought as well. Included are questions about job needs, job titles and duties, pay levels, and desired levels of education. The instruments were used during team visits to each employment site.

The data analyzed for this study consisted of responses to the survey questionnaires and impressionistic statements written by the interviewers. The interviewers also wrote recommendations for curriculum development. Quantitative data were synthesized into question-by-question summary tables, and qualitative data were content-analyzed so they could be condensed. Excerpts from comments and recommendations are presented, both in the text and in appendixes.

Findings are presented primarily by occupational groupings in both a detailed chapter and a summary chapter. Among the findings discussed are these:

- Contacts between schools and employers tend to be "hit-or-miss."
- Employers indicate that the kind of reading skills taught, such as reading work orders and technical manuals, is as important as the amount taught.
- Although a substantial minority of employers consider on-the-job training best, for the most part employers feel that a school-job partnership is optimal for occupational training.

These and other findings are discussed in detail; many tables are presented; and limitations of the data are discussed as well as their implications.

Hanby, J.; Harper, R.; and Myers, L. *A Comparison Study of the Benefits of Secondary and Postsecondary Vocational Education.* Portland, OR: Northwest Regional Educational Laboratory, 1978.

The purpose of the study was to assess graduates' perceptions of their training, employers' assessment of graduates' training, and to conduct a comparison of perceptions of quality of life. The student sample was selected from Montana high school graduates who had been employed in Montana at least two years. Employers who often hire vocational education graduates were selected to represent various sizes and types of businesses. Data were gathered through telephone surveys and mail questionnaires. Employers were asked to rate postsecondary programs, secondary programs, and general academic programs as seen in employees who graduated from them. Employers were also asked to rate employee attitudes and to indicate whether or not they felt employees should have had more experience during training. Postsecondary programs were rated highest in terms of their ability to prepare for work and also in terms of their graduates' work attitudes. Most employers indicated a need for more job experience during training.

Helmstedter, W. E. *Community Employers' Evaluation of Bakersfield College Cooperative Work Experience Education Program.* (ED 153 673)

The purpose of the study was to evaluate a work experience education program and to assess student job performances as perceived by present and past employers. Data on the current semester program (Fall 1979) were collected by using the *training agreement evaluation* form completed by 109 employers randomly selected. A personal interview conducted by the program instructor/coordinator with employers enhanced the completeness of data collection. Data were gathered from past program employers through program evaluation questionnaires mailed to them. Employers and coordinators respectively rated student performance in seven major categories on a four-point scale: (1) *limited progress;* (2) *needs further improvement;* (3) *meets standards;* and (4) *exceeds standards.* The seven categories evaluated were job competence, dependability, attendance, initiative, appearance, relationships with people, and progress on the job.

The employers were also asked to answer such questions as, "How well does the student meet performance standards, organization, quality, and quantity of work?" and "Do the student's attitudes reflect thoughtfulness, tact, respect, and courtesy to supervisors, peers, subordinates, and clientele?"

The five interviewing questions included the following: Do you feel that the student/employee's course work at Bakersfield College has been relevant to what he/she has been doing on the job for you? Has the course work increased this person's worth as an employee? On the basis of your experience with the student, would you hire another work experience employee when another position opens? Do you feel the work experience program decreases employee turnover? and Does it decrease training costs for the employer? Findings were as follows: (1) Fall semester 1977 employers were satisfied with the program students as to their job competence, dependability, attendance, initiative, appearance, job progress, and relationship with coworkers. (2) Employers were generally satisfied with the Bakersfield College Work Experience Program. (3) Fifty-nine of the 109 employers felt that student/employee college course work was relevant to their jobs, while 52 indicated that the course work even increased student value as an employee. Seventy-eight employers said they would hire other program students in the future. (4) In determining whether the program improved employee job satisfaction, thirty-six considered it significantly effective, twenty-three only moderately effective, and ten, effective only to a limited extent. (5) Employers were somewhat divided in their responses to training cost savings and employees. (6) About half of the employers felt that they contributed input to the program while the other half felt otherwise. An overall conclusion was that the majority of the employers had a favorable impression of the program, but they also identified areas that were weak and areas where communication needed to be improved.

Iowa Department of Public Instruction. "A Report to the Iowa Department of Public Instruction on Employer Reactions to Employees Training in Preparatory Career Education Programs." Iowa Department of Public Instruction, 1977.

The stated purpose of the study was to determine whether employer evaluations of former students of preparatory career education programs in the technical high schools and community colleges of Iowa could be collected and analyzed in a meaningful way. Data were collected from questionnaires administered to employers by experienced interviewers. Employers responded to items concerning job skills, technical knowledge, quality and quantity of work, and attendance. Findings showed employers generally satisfied with these characteristics but concerned with employees' reluctance to accept responsibility and their need for supervision.

Julian, R. E. "A Study of Employer Satisfaction with Graduates of Oklahoma State University School of Technology." Ph.D. dissertation, Oklahoma State University, 1976.

The purpose of this study was to evaluate employers' satisfaction with their employees in regard to their performance, conformance, dependability, personal adjustment, and general satisfactoriness. Data were collected from a questionnaire mailed to 306 employees who were graduates from the four-year technical occupational training program of Oklahoma State University School of Technology from December 1973 through May 1975 and one mailed to each of their employers.

To determine whether employees saw their job satisfaction in the same relationship as their employers, the Minnesota Satisfactoriness Scale (MSS) was modified and used by employees as a self-evaluation instrument on their job satisfaction. Based on the three criteria, *not as well, about the same,* and *better,* employees were asked to compare themselves to others in their work group by answering such questions as: "Do you perform tasks requiring variety and a change of methods?" "How good is the quality of your work?" "Do you perform repetitive tasks?" Employers were asked to rate the same twenty-eight items as the employees did to evaluate employees' job satisfactoriness.

Findings included the following: (1) There was a tendency for employees' self-ratings to be slightly higher than those submitted by the employers. (2) The correlation coefficient between the employers' and employees' performance rating was the highest among the five categories (i.e., performance, conformance, dependability, personal adjustment, and general satisfactoriness). (3) The socioeconomic status, graduation date, and age of employees had very little effect on general satisfactoriness ratings made by either employer or employee. Overall conclusions were that the employee group in this study fell within the satisfactory range on general satisfactoriness as rated by the MSS, and that because of the agreement in ratings, the data on job satisfactoriness could be gathered from either employees or employers.

Kapes, J. T. *AVTS Employer Follow-up Study.* Bethlehem, PA: Lehigh University, 1977. (ED 051 576)

Purposes of this study were to evaluate employers' satisfaction with the graduates' occupational competencies and to obtain the employers' general perceptions concerning the quality of Pennsylvania Area Vocational-Technical Schools' (AVTS) programs. Data were collected by using the mailed questionnaires from stratified nonrandom sample of 1,000 Pennsylvania employers. The information of the employers was provided regarding 3,285 AVTS students who had graduated in 1976. Employers were asked to provide general information and to rate an employee's characteristics by using a 1 to 5 Likert scale: (1) *poor,* (2) *below average,* (3) *average,* (4) *above average,* and (5) *excellent.* Graduates were rated on their quality of work; the degree to which they possessed basic reading, verbal, and

computational skills; the degree to which they possessed the general work habits and attitudes necessary for success on the job, and so forth. By using the scales of *most important (1) to least important (7),* employers were also instructed to rank the importance of the job skills and employee qualities to their specific occupation.

In addition to this, employers were also requested to indicate their perceptions about the quality of AVTS programs and graduates by circling one of the five-point scales: (1) *strongly disagree,* (2) *disagree,* (3) *neutral,* (4) *agree,* and (5) *strongly agree.* Statements included: "I would rather hire a graduate from an AVTS than from a general or academic high school program," "AVTS graduates are more adequately trained for specific job competencies than those from other secondary programs," and others. The following were representative findings: (1) Based on the Likert scale, the graduates were rated highest on quality of work, basic skills, and near the middle on work habits and attitudes. (2) Employers ranked quality of work as most important and job attitudes second in importance. (3) Employers would prefer to hire AVTS graduates and felt they possessed adequate specific job competencies; however, they did not agree that AVTS graduates displayed better work habits or needed less supervision. (4) In regard to communication skills, 46 percent of employers would like more emphasis in this area. (5) The area of job attitudes and personal relation skills represented the single greatest concern to employers and perhaps the biggest challenge to schools. (6) Although employers in Pennsylvania favored the present secondary vocational system,

Overall observations revealed that (1) employers of the graduates responded favorably to their AVTS graduate employees; (2) employers of AVTS graduates differed in their evaluation in respect to the business they represented, and (3) regarding employers' perceptions toward AVTS programs in general, findings of this study should be useful to planners of vocational education in Pennsylvania.

Kaplan, S. "Entry-Level Positions and Skills as They Relate to the Local Schools' Programs as Perceived by Employers." Ph.D. dissertation, Temple University, 1975. Microfilm 75-28,283.

Purposes of this study were (1) to investigate the entry-level positions available in the Philadelphia area, and (2) to determine whether the school training programs were adequate enough to prepare students to obtain entry-level jobs as they are perceived by employers.

Data were gathered from a free-response questionnaire-opinionnaire given to 202 of the largest business and industry employers in the Philadelphia metropolitan area. The five hundred or more people working for 50 employers represented one-third of the local work force. Employers were asked to indicate the general and specific skills or knowledge needed for employment, business/industry satisfaction with the school product or preparatory trainings, entry-level position opportunity, and future labor market demand. Such questions as the following were included: "Please indicate the type and number of positions available for high school graduates in your firm for September, 1974." "Is there any way in which the vocational training programs offered by the Philadelphia schools can be changed to better serve your needs? Please explain." "What newly created positions do you foresee for the fall of 1977?" and "Is the present vocational education in Philadelphia schools adequate for your purpose?"

Findings were as follows. (1) There were 160 specific entry-level positions available to high school graduates in 169 firms; among them, manufacturing business provided the majority of entry-level positions. (2) 60 percent of the entry-level positions required on-the-job training or an apprenticeship program in such fields as mechanics, electricity, service occupations, utility line installations, and so forth; (3) employers were not satisfied with certain nonskilled qualities of employees, such as sloppy

appearance and speech, insufficient desire to work, failure to understand the handled product, weakness in following directions, lack of common sense, and desiring high pay for minimal qualifications; (4) employers stated that some business training or background was needed to obtain and holdhold an entry-level position. (5) School should provide a training program more closely allied to industrial programs because better trained employees are needed.

Overall conclusions were that employers placed considerable importance on training prospective workers in the areas of courtesy, and conversation, as well as in efficiency and neatness. Also, employers regarded the interpersonal area as very important including compatibility, pleasing personality, responsibility, honesty, and pride and enthusiasm in team work. Above all, employers expected high school graduates to possess a good background in training that would help them obtain initial employment, achieve promotion, and advance on the employment arena.

Kaufman, J. J., and Lewis, M. V. "The High School Diploma: Credential for Employment?" U. Park, PA: Institute for Research on Human Resources, The Pennsylvania State University, 1972.

The stated objective of the study was to test the hypothesis of credentialism where people are evaluated with respect to the credentials they hold (in this case the high school diploma). The sample was comprised of interested students from 1,200 dropouts who were randomly assigned to either a general education or a skill training program. Employer satisfaction was indicated by employer ratings on work performance in the areas of occupational knowledge, manipulative skills, personal qualities, and overall preparation. Both groups were found to be very similar in employer ratings.

Market Opinion Research. "Employers and Young Adults Look at Vocational Education." Columbus: Ohio Advisory Council for Vocational Education, 1977.

The purpose of the study was to determine the effects of vocational education on employability, job satisfaction, student satisfaction in training, and employer satisfaction in training. The sample consisted of graduates of Ohio vocational education and other curriculum programs. Employees and employers were matched in pairs for interviews. Employer satisfaction was indicated by employer ratings of workers on entry-level skills, technical knowledge, attitudes, supervisory potential, and school preparation. Findings were that employers judged vocational education graduates higher than graduates of other programs. Employers also felt vocational education graduates should have more training, especially in basic academic skills and responsibilities.

Morton, J. B. *Part-Time Adult and Employer Evaluation.* Stillwater: Oklahoma State Department of Vocational and Technical Education. Division of Research, Planning and Evaluation, 1977. ED 173 545.

Purposes of this evaluation study were (1) to assess adult students' satisfaction with the vocational training or retraining offered by the Oklahoma State Department of Vocational and Technical Education and (2) to determine employers' satisfaction with adult students as to their job performance and previous vocational training. Data were collected by using questionnaires mailed to 5,673 part-time adult students who had enrolled in and completed the vocational preparatory training courses offered by the Oklahoma State Department of Vocational and Technical Education during the fiscal year 1975. One hundred eighty-four employers who had hired those program completers also participated in the study.

Adult students were asked to provide their employers' names and addresses as well as their own personal, employment, and job information. They were also requested to evaluate program curriculum and equipment by checking the five-point scale: (1) *excellent,* (2) *very good,* (3) *adequate,* (4) *inadequate,* (5) *does not apply.* Questions given, for example, were "How would you rate the skill training you received in your vocational-technical program?" To assess the program instruction, the question "How would you rate the teaching quality of the instructor in your vocational training program: (1) excellent, (2) good, or (3) poor," was asked. Employers were asked to evaluate employees' performance by checking any of the three blocks: *above average, average,* and *below average.* Areas to be measured included work quality and quantity, willingness to accept responsibility, cooperation with management, compliances with company policies, etc. The employers were also given five ratings: *excellent, good, average, below average,* and *unsatisfactory* for the overall suitability according to the employee.

Findings were as follows. (1) More than seventy percent of the employee sample rated the skill training as either very good or excellent, while only about 4 percent rated it poor. Fifty-eight percent said that the training program increased their ability to perform job duties. Seventy-one percent said the training program did not help them to increase skills in handling responsibilities assigned by the employer. (2) Ninety-three percent of the employees rated program instructors either good or excellent on questions concerning teaching quality, subject matter knowledge, the extent to which the instructor was up-to-date in the field, and interest in the student. Seventy-two percent of the employees rated the instructor's interest in their work progress after graduation excellent, while twenty-eight percent rated it poor. (3) About forty-five percent of the employers rated the adult students' quality of work above average, while forty-nine percent rated the quality as average. Almost 41 percent rated the quantity of work as above average and 50 percent rated it as average.

In respect to the overall suitability of the employees, 39 percent of the employers rated it excellent. (4) In regard to employer's satisfaction with the employee's vocational training, more than 90 percent were satisfied with training. Employee failure to meet employer expectations in work attitude was the major cause of employer dissatisfaction.

Overall conclusions were that most of the students and their employers were very satisfied with part-time adult preparatory training in Oklahoma, and although attention may be needed to improve work attitudes, the vocational training was considered generally adequate in that state.

A Program Review of Secondary Vocational Education in Ohio: Job Placement and State Funding. Ohio Legislative Service Commission, Staff Report No. 126, April 1978.

This study was done to provide feedback on the results of earlier vocational education policy and funding decisions and to provide useful information and guidelines for future legislative decisions. The study focuses on the job placement of vocational graduates (at the secondary level) and on related issues, such as graduate job satisfaction and graduate performance as evaluated by employers. The issue of how state funds can be better distributed to meet program costs is also addressed.

Ten vocational education planning districts (VEPDs) were randomly selected from the sixty-five that had graduated their first senior class by 1976. Four-day field visits were made to schools in these districts and one-day visits were made to Akron City Schools and to a Joint Vocational School in the Columbus area (on the recommendation of the State Vocational Education Division that they had excellent placement programs). One hundred sixty-six employers were interviewed by phone. Formal questionnaires were administered to vocational instructors and placement coordinators. The sample districts are described in an appendix.

The results are discussed in great detail, including consideration of intervening factors, such as availability of employment.

The following findings are reported:

- Vocational programs similar to those offered by technical colleges or proprietary schools do not have good placement records.
- More than 90 percent of the graduates indicated that they would enroll in vocational education again.
- Students and teachers expressed concern with technical skills, whereas employers stressed employability skills and adaptability.
- 58 percent of the employers hire vocational graduates for jobs that nonvocational high school graduates cannot fill without further training.
- 76 percent of employers said they prefer to hire vocational graduates rather than general high school graduates.
- A few students in each sample district said they would have dropped out of high school had there not been a vocational program.

Two conclusions reached are that the vocational education program in Ohio has been relatively successful in job placement, and that employers, while generally satisfied with the skills of vocational graduates, would favor increased communication with school officials. The need for a closer look at guidance and counseling and at the effects of vocational screening is suggested, and other areas for further research are indicated. This study was well defined and thoroughly conducted. It is one of the few studies that compares perceptions of teachers, students, and employers. It is notable also for its discussion of economic conditions in the labor market and other variables that affect placement rates. Lacking are (1) a discussion of the development of survey instruments, and (2) the collection of placement rate data for nonvocational graduates.

Schowalter, Lynn M. "The Relationship of High School Curriculum and Other In-School Characteristicts to Employment Success One Year After Graduation." Pennsylvania State University, Department of Vocational Education, 1974.

The purpose of the study was to compare selected in-school characteristics to on-the-job success as measured by the employer's evaluation. Data were collected from employers of the male 1972 graduates of Altoona High School. Employers completed the Minnesota Satisfactoriness Scale, ranking their employees' performance on the job. Findings showed no significant difference between vocational and academic graduates as to employers' evaluation of satisfactoriness.

Smiley, L. L. *Employer Satisfaction with the Skills of Vocational Education Graduates in North Dakota.* Grand Forks: Bureau of Educational Research and Services, University of North Dakota, August 1976.

The initial data base consisted of all secondary and postsecondary sites in North Dakota with at least five vocational programs. Personnel in each program identified three major employers of program graduates and one or two self-employed graduates. The 482 names identified constituted the survey sample. Of 226 employers indicating a willingness to participate in a personal interview, 191 provided data. A questionnaire (appended to the document) was developed for use in the personal interview, which took approximately thirty minutes.

Twenty-one questions were asked, several with multiple parts. Some of the questions were in a rating-scale format, some in the form of checklists, and others were open-ended or required a yes or no response. They addressed issues of general satisfaction with employees; degree of specific knowledge, skills, and abilities employees possessed; and ways of improving training.

Findings are presented in the order that questions appear on the interview schedule. Responses to each question are summarized in tabular form and discussed briefly. It is left to the reader to draw conclusions. The reported findings include the following:

- A specific employer comment is, "Most of the vocational education graduates come to work with skills well developed, but the training programs have failed to offer the students anything that prepares them for moving into supervisory or managerial positions."
- Nearly 90 percent of the employers rated the vocationally trained employee high to average in comparison with those without vocational training. Many could not make a comparison because certification requirements for entry-level job placement prevented a nonvocationally trained individual from being hired.
- Several needed areas of improvement for job applicants were listed. Heading the list (in order of frequency of response) were attitudes toward work and appearance. Also listed were courses that vocationally trained students should have, with courses in communication, speaking effectively, and work orientation at the head of the list. Need for a course in success in marriage was listed by 88 percent of the respondents.
- Many employers contact schools to recruit qualified employees. Some (including out-of-state) schools are regularly contacted because such individual schools have gained reputations for quality, good skill development, and so forth.
- A list of some of the general comments employers made about vocational education programs and the graduates is provided. Among the comments are: "Realities of position need to be made clear to the students," and "Secretaries trained as medical secretaries are less capable than those with no specialized training."
- Several employers expressed the opinion that high school graduates are sold a bill of goods when told they have a saleable skill after their high school vocational training, whereas the intent of high school vocational training is to introduce young people to vocational areas and materials of those trades, not in any sense to provide a terminal degree. One employer said, "If this high school level training has helped a young person to clarify vocational interest which can be furthered by additional schooling, it has served an excellent purpose."

South Carolina Advisory Council on Vocational and Technical Education. *The Adequacy of Vocational and Technical Education.* Columbia: South Carolina Advisory Council on Vocational and Technical Education, February 1976. (ED 126 315)

The South Carolina Advisory Council on Vocational and Technical Education culminates its evaluation responsibilities each year by preparing and publishing an annual evaluation report. It became apparent, however, that "if one is to adequately evaluate the 'effectiveness' of programs, what better perspective exists than that of the employers?" This study was initiated to explore that often-neglected perspective.

Many questions were asked:

- Are technical and vocational centers good sources of prospective, trained employees?
- Do the centers meet the needs of business and industry?

- Do they meet the needs of the students?
- How do graduates of the centers compare with other employees?
- What is the quality of this education?

Recommendations were sought as well.

Ten thousand employers from large companies within the state constituted the population for the study; questionnaires were sent to each of them. Usable returns were received by the cutoff date from 1,161 employers, a response rate of 12 percent. Characteristics of the respondents are discussed and presented in tables. A cross-section of the South Carolina business and industrial community and of the geographic regions of the state was represented. The survey form was mailed in October 1975. The questionnaire does not ask when employers had experience with graduates of vocational or technical centers.

Among the conclusions discussed are the following:

- Employers consider both vocational and technical centers a good source of trained employees, generally rating those employees higher than others.
- Both vocational and technical centers meet the needs of business and industry and of the students, but they excel at meeting the needs of students.
- Employers are more familiar with technical education centers/colleges than with area vocational education centers.
- Vocational and technical programs are oriented more to manufacturing than to other categories of business and industry.

Sundi, R. L. "An Investigation of Selected Tasks That Affect Job Performance of Graduates as Perceived by Trade and Industrial Education Teachers and Employers." Ph.D. dissertation, University of Cincinnati, 1971. Microfilm 72-9255.

Purposes of this study were (1) to investigate those tasks which affect the job performance of employees in the world of trade and industry, and (2) to assist teachers in developing meaningful instructional programs that will meet industrial needs as well as technological changes. Data were collected by using the questionnaires mailed from 415 trade and industrial education program teachers from Greene Joint Vocational School and the Hamilton City School District, as well as from 132 employers who had hired students from trade and industrial education programs in the state of Ohio.

Both the employers and program teachers were asked to provide general background information and to rate the 110 job performance-affected tasks listed in the questionnaire, based on their level of importance. The five-point levels were (1) *not important,* (2) *slightly important,* (3) *of average importance,* (4) *of considerable importance,* and (5) *extremely important.* The 110 tasks included the following: interpreting results of the work, handling several assignments, using the telephone, employing good English grammar, participating in group meetings, and cleaning own work area.

Among the significant findings were: (1) of the total 110 tasks, both teachers and employers tended to rate high in relation to job performance those tasks which are attitude, interest, and motivation-oriented; (2) of the total 110 tasks, 55 were considered important enough by both sample groups to be included in the curriculum of a trade and industrial education program; (3) employers rated a total of 55 tasks (50 percent) *at or above average* in importance to job performance.

Overall conclusions were as follows. (1) There is a general agreement between trade and industry education teachers and employers as to those tasks which affect job performance. (2) Those tasks which fall in the category of interest, attitude, and motivation, such as assisting in the schedules with other departments and reviewing job problems with supervisor, contribute significantly toward graduates' job performance and should be included in the instructional program. (3) Those tasks which both groups rated at 3 or above should be designed as technical information in the trade and industrial education program.

Talarzyk, W. W. *Perceptions of Vocational Education in Ohio by Employers.* Columbus: Educational Marketing Association, 1975. OYV43.2: P411/975.

The purpose of this research was to identify Ohio employers' attitudes and perceptions of the Ohio vocational education programs and its graduates.

Data were collected by mailing the validated questionnaire to 1,000 randomly selected Ohio firms. Two hundred fifty-one employers completed and returned the questionnaire, providing a 25 percent response rate. Employers included the users and non-users of vocational education graduates. The vocationally trained graduates included those from agricultural education, business and office education, distributive education, health education, home economics education, technical education, and trade and industrial education. The questionnaire contained attitude questions, attribute-importance questions, employee-rating questions, open-ended questions, and classifications questions. Employers were asked to indicate their satisfaction with employees by checking different-level answers in five blocks, for example: "Those having vocational education have more knowledge"—*strongly agree, agree, undecided in opinion, disagree somewhat,* or *strongly disagree.* "Responsibility and Ability to follow through—(1) *most important,* (2) *second most important* . . . (10) *least important.* Employers were also asked to measure the degree of graduates' competency in areas such as skills needed for job opening by marking one response—*excellent, good, average, below average,* or *poor.* In the section containing open-ended questions, employers were requested to respond to: "What do you see as the basic strengths of Ohio's vocational education program?" and "What additional information would be helpful to you in understanding and evaluating the state's vocational education programs?" Results were as follows: (1) 60 percent of the respondents agreed or strongly agreed that they had had favorable experience with vocational education graduates, while 76 percent agreed or strongly agreed that vocational education students should have more practical experience. (2) Dependability was considered by employers as the most important working trait and responsibility and ability to follow through were second most important. (3) Vocational education graduates were rated strongest on skills needed for job opening, and willingness to learn new job skills or take training courses. (4) Employers who did not hire vocational education graduates agreed more strongly than those who employed vocationally trained graduates in the following: Vocational education students are poorly trained. On-the-job training is better than vocational education. Nonusers of vocational graduates agreed more strongly than heavy users with graduates having more knowledge, and most new employees today are well prepared for jobs. (5) The importance rating on employee attributes varied depending on the size of the firm, the percentage of employees who were vocational education graduates, and the types of employees hired. (6) Vocational education graduates were rated better than or equal to nonvocationally educated students on all employee attributes by medium (1–6 percent) and heavy (over 6 percent) users of vocational education graduates. (7) Firms with distributive education employees and those having health education employees tended to rate vocational education graduates higher as compared to nonvocationally trained graduates on skilled needs for job openings, attitudes toward company/employer, and concern for productivity. A large majority of all firms in the sample hired business and office, technical, trade or industrial-educated employees, while few firms employed people in the other four categories of educational background.

Overall conclusions were (1) that Ohio employers' attitudes toward and perceptions of vocational education were quite favorable; on almost all employee attributes, vocational education graduates were evaluated better than graduates of other curricula; (2) that the strengths of the program included the provision of concentrated training in one area, and graduates with more knowledge of their jobs than other new employees; whereas the program weaknesses were graduates lacking practical experience, programs lacking proper contact with employers, and too general a program; (3) that employers perceived the *need* for more practical experience for vocational education students; (4) that smaller firms tended to have a less favorable attitude toward vocational education than larger firms; and (5) that nonusers of vocational education graduates tended to have a less favorable image of vocational education graduates than heavy users in the following: vocational education students are poorly trained, on-the-job training is better than vocational education. Nonusers of vocational graduates disagreed more strongly than heavy users with the statements, graduates have more knowledge, and most new employees today are well prepared for jobs.

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